

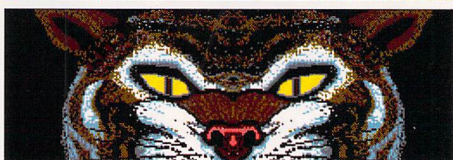
ST FORMAT

Switch on the power

- and see what your ST can really do!

**SPECIAL
JARGON-BUSTING
ISSUE!**

ST FORMAT COVER DISK 19



CHAMPION OF THE RAJ

Rip-roaring playable demo of ImageWorks' brand new Indian action-strategy game

PMA - The proportional mouse accelerator

McAIPOF READER - Reads textfiles out loud!

● **GFA BASIC 2** - Full version with manual, plus part one of STF's Tutorial ● **GUARDIAN** - The hidden virus detector ● **DBASE ONE** - Full database program, with complete index to all STF issues ● **PLUS FIVE GREAT ACCESSORIES**

SINGLE-SIDED DRIVES CAN ACCESS SIDE A ONLY

A

B

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- Learn to program with our new "How to" beginners' series
- ST FORMAT's Gold Awards - who you can trust, what to buy

On review: 20 red hot new games!

The best tech help around ● 20 essential accessories

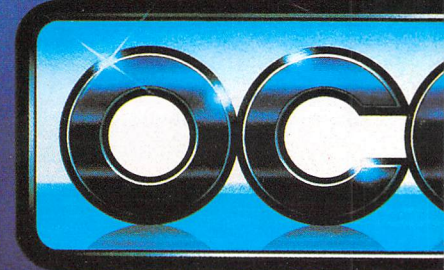
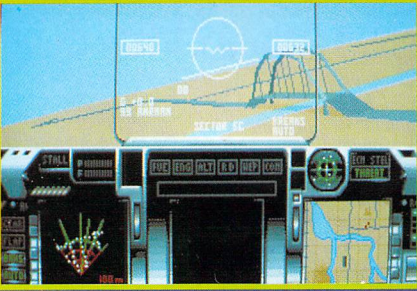
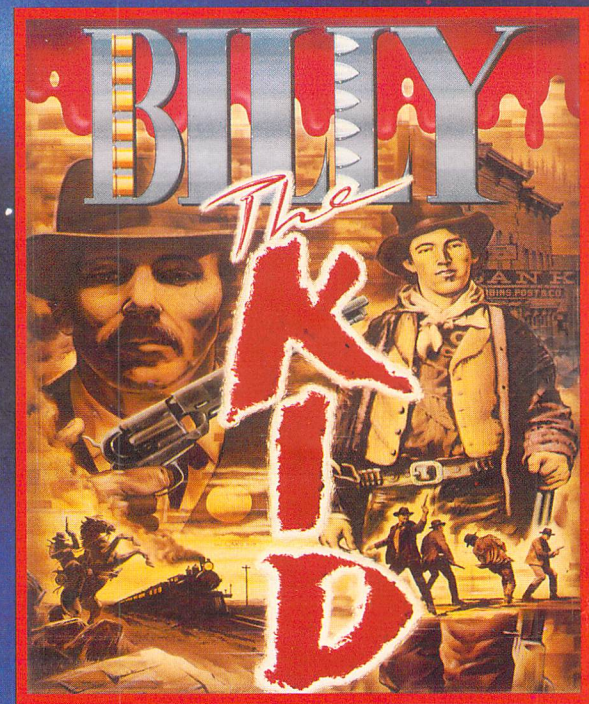
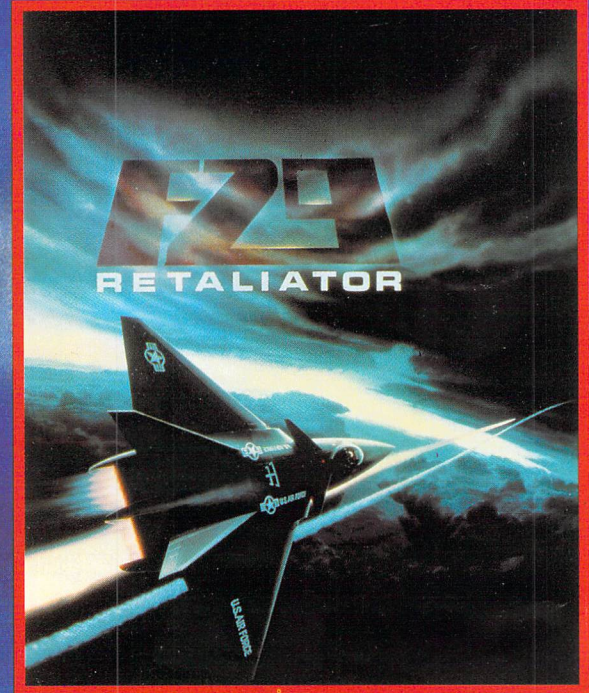
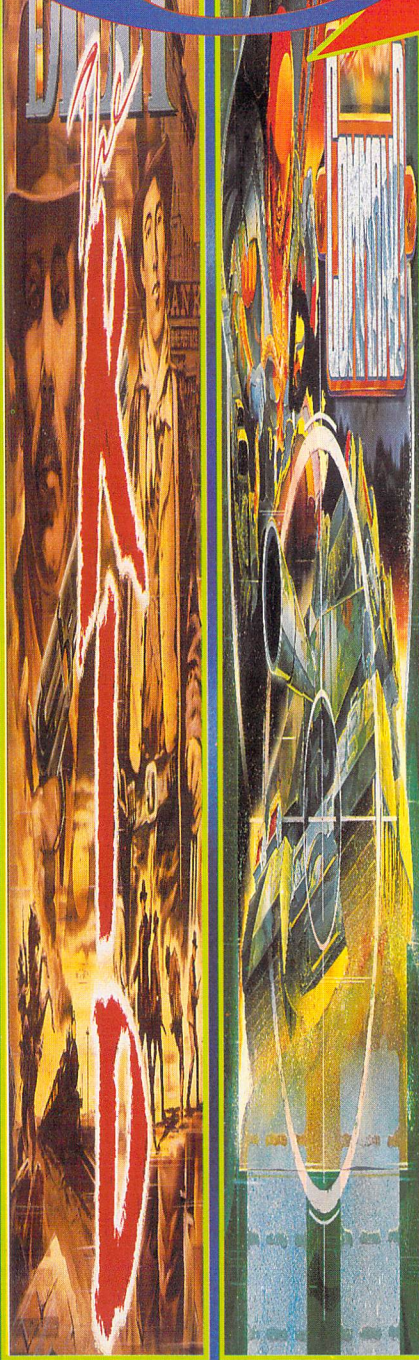
● Buyers' guide ● STs on stage... and in programming



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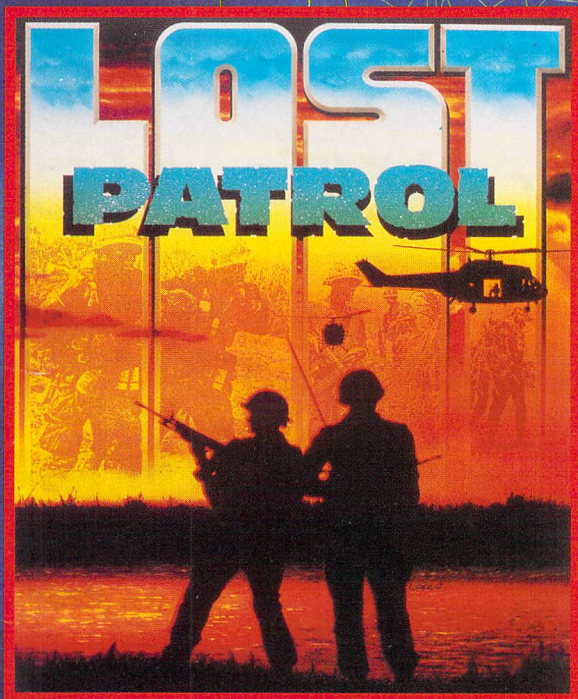
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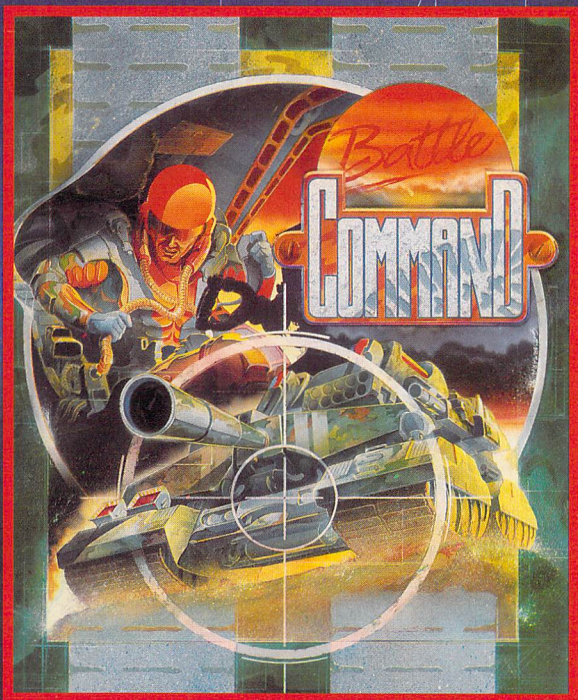


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WE'RE FIT, WE'RE ALIVE BUT WE'RE NOT BACK HOME

Our chopper tailed-out after taking a hit... the pilot won't be leaving the ground again. Now I have to lead my weary platoon back to our lines through the jungles and paddy fields. Entering what appears to be a friendly village, only to find it is a cover for a guerilla faction, is just one of the things that helps our insomnia... that and the elusive psycho in my squad - I gotta figure out who he is before the morale factor becomes our worst enemy. Jeez, will this stupid war never end! Sensational graphics and a game-play that will have you sweating on the edge of your seat...every move you make, every decision you take may not only be the last for yourself but also for your platoon.



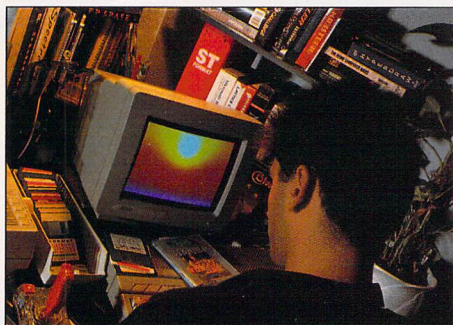
STRATEGY AND ARCADE ACTION

for one or two players. Take on the role of the desperado with a heart of gold; Billy himself, or his ex-best friend, sharp shooting, law abiding pillar of the community, Sheriff Pat Garrett. As Billy you must survive by your wits. On arrival, check out the town, the men you think can help you, where the big games of poker take place, is the bank worth taking or is it going to be too hard to crack? The other side of the coin is Pat Garrett. You must track down Billy using all your cunning. The payroll train is due to arrive...do you take all your deputies or leave some to keep an eye on the bank? And when you find Billy you will meet in the final showdown...now the guns do the talking!

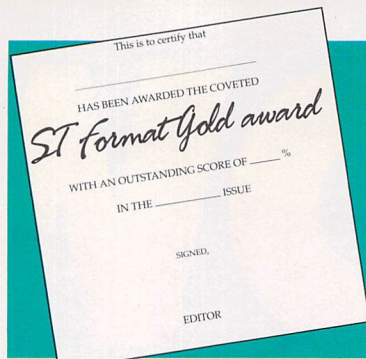
FIRST INTO BATTLE... LAST TO LEAVE

Control the "Mauler" Assault Tank in one of 16 scenarios in the ultra war, fought between two nations in the new World. The latest phase of the North/South war has reached a stalemate, eventually developing into a standoff between armies massed over a long, dug-in battlefield. Such are the defensive capabilities of each side, full scale attacks are suicidal, so any offensive moves are, by necessity, small "behind the lines" actions performed by elite troops in specially designed vehicles. The Mauler is the latest such machine - capable of being lifted in and out of hostile territory by fast stealth choppers and armed with the most advanced weaponry the Northern scientists can devise.

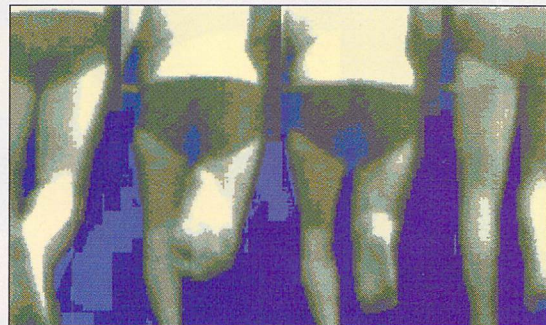




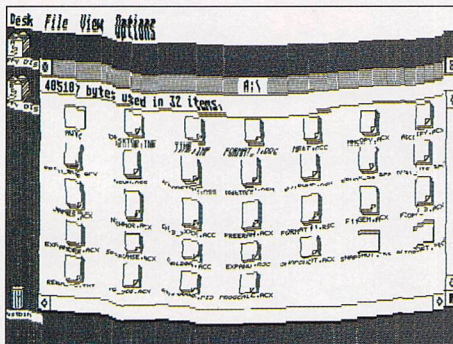
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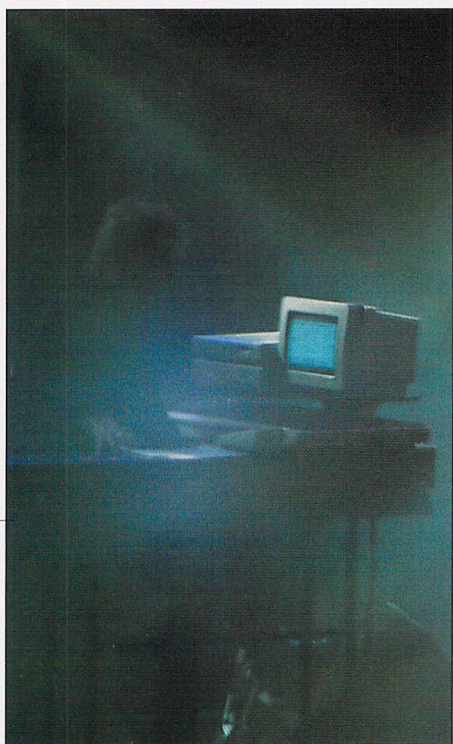
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Your guide to those, er, vital ST accessories54



STs live: music made possible by Atari120

No previous experience required

Whether you've owned your ST for years or just a few days, there's more than likely a few things you don't quite understand. In this special jargon-busting issue we answer all those questions you never dared to ask: what exactly is an accessory/RAM disk/ virus, what are they for and how would you acquire one? How do you choose the software you need? How do you find out which version of TOS you have – and what is it anyway? Now turn to page 7...

ST FORMAT

ABC January – June 1990 **50,246**

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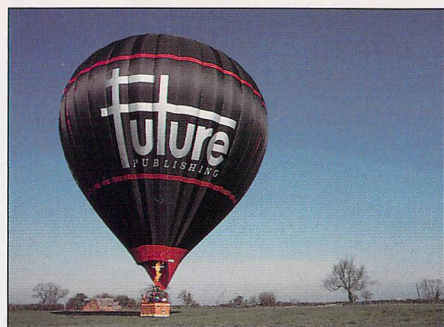
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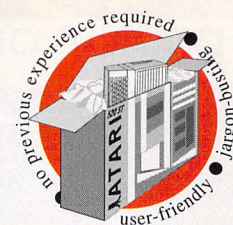


Win a day out you'll never, ever forget.....118



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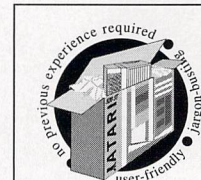
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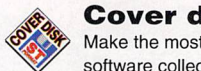
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COVER DISK P45

"1,347K of bostin' ST software? Damme, don't mind if one does!" – Lord Bufton of Tufton (a proverbial Man in a Grey Suit), speaking from a smokefilled room yesterday

Champion of the Raj

Death-defying tiger-taming stomach-churning lunch-repeating excitement in this fully playable, no holds barred demo from Imageworks

Plus all this... complete implementation of GFA's popular and critically acclaimed BASIC ■ Complete fully functioning database program – plus a complete index of everything ST FORMAT's ever done (and that's quite a lot, actually, thank you for asking) ■ Not one, not three, but five complete accessories ■ The program that reads text files – out loud! ■ Least but not last, a little utility to speed up your mouse ■ And finally, a cracking little virus detector

CHAMPION OF THE RAJ
Rip-roaring playable demo of Imageworks' brand new Indian action-strategy game
PMA - The proportional mouse accelerator
McAIPDF READER - Reads textfiles out loud!
● GFA BASIC 2 - Full version with manual, plus part one of STF's Tutorial
● GUARDIAN - The hidden virus detector
● DBASE ONE - Full database program, with complete index to all STF issues
● PLUS FIVE GREAT ACCESSORIES
SINGLE-SIDED DRIVES CAN ACCESS SIDE A ONLY

ST FORMAT COVER DISK 19

ALL PROGRAMS STE COPYABLE (E)

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ST FORMAT, the biggest-selling ST in Britain by a good 20,155, is in your face from Future Publishing, also responsible for New Computer Express, Amiga Format, Amstrad Action, Commodore Format, Your Sinclair, PC Plus, Sega Power, 8000 Plus, Classic CD and who knows...





protar products include the fastest hard drives available for the Atari ST. The fully compatible auto-bootable hard-disks are mounted in an elegant housing which is perfectly at home with the ST design. They are supplied completely ready for operation – no hidden preliminaries.

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protars' 40 DC, 80 DC and 160 DC models are additionally equipped with a 64 kB cache memory integrated on the hard disk; this cache memory reduces disk accessing times by up to 50%.

Some other examples of protars' hardware include:

- the R44 removable disk drives
- the T60 and T150 tape streamers

- ProScreen TT – a large scale monitor for the Atari TT

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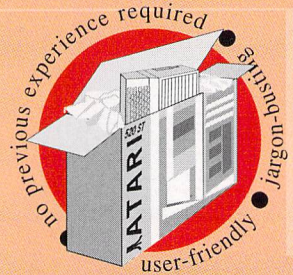
For further information please contact:

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for the future.**

congratulations on owning an ST

Welcome to a very special issue of Britain's top magazine for ST users. Editor Steve Carey would like a word in your ear...



■ Look out for this symbol throughout the issue – and if you still get a bit flummoxed, turn to page 65 for our special two page jargon-busting section

Hello and welcome. Whether you've been buying ST *FORMAT* for a year and a half – perhaps even buying us when we were ST Amiga *Format*, two years ago – or whether this is your very first issue, we'd like to extend a warm welcome. Congratulations in particular to everyone who unwrapped at Christmas what is without a doubt the most versatile and best value-for-money computer available. This is a special jargon-busting issue designed to break down some of the impenetrable barriers that prevent you getting the most out of your ST.

Before all you regular readers fling this magazine away in disgust, consider this: are you sure you don't need any help? If you know exactly what the following five terms stand for, then perhaps you can afford to miss one or two of our special features this month (answers at the bottom of the page):

1. ASCII
2. MIDI
3. RAM
4. RGB
5. TOS

Not quite so easy. It's enough to put newcomers off this whole computing business forever. Yet the jargon you encounter in your first few months with your ST is deceptive, for once you've lost your technophobia you'll soon discover that things aren't so bad after all. Remember that even the most technically literate of us were once beginners like you.

By the way, if at any stage in this issue you come across complete gobbledegook, turn to page 65 for a special jargon-buster dictionary that translates those horrible terms into user-friendly explanations.

So what do we have in store for you? Firstly, the best and most packed ST Cover Disk anywhere in the world, this month featuring a fully playable demo of Imageworks' *Champion of the Raj*. The Disk also boasts a complete version of GFA Basic, regarded as the best BASIC around, which ties in with a beginners' guide to programming, starting page 59. There are a few simple programs to follow, which also feature on the Cover Disk for you to run. Go on, give it a go – you've never had it so good!

Also on the Cover Disk, besides programs to read text files out loud to you(!) and speed up your mouse, there's a virus detector, a complete database program, an ST *FORMAT* index, and a great collection of accessories – useful little programs that load automatically when you start your ST (and there's a roundup of the 20 best on page

54). For everything you need to know about your Cover Disk turn to page 45. And on page 51 you'll also find a beginners' guide to getting going.

DESKTOP – our regular help, tips and advice section – is the place to start if you want to do anything more than just play games. This month's DESKTOP (page 135) is devoted to the simple but immensely irritating problems facing beginners (and sometimes not just beginners).

When you're playing a good ST game – such as any of the 20 reviewed in this month's SCREENPLAY, beginning page 69 – do you find yourself wondering how it was all put together? Find out in the special in-depth series beginning on page 38.

Speaking of games, if you don't get to see games like *Powermonger* (reviewed page 70) and *Prince of Persia* (page 96), you'll never know what you're missing. They're absolute stonkers.

Of course, games can sometimes be too difficult. Every month we have a section of the magazine devoted to helping you to progress and even cheat your way through. And you may not know that many games feature hidden effects and cheats. Turn to page 108 for the low down in GAMEBUSTERS...

Also in this issue you'll find out how STs are used by bands worldwide to make music (page 120) – did you know that just about every act on Top of the Pops has used STs at some stage in the music-making process? You'll discover how to create amazing works of art using cheap and in some cases free graphics packages (page 116). You'll also learn about some of the latest software releases, in areas from education (page 129) to Computer Aided Design (page 154).

You'll also discover that, unbelievably, there are almost 50 companies dedicated solely to distributing free software! It's called Public Domain software, and every month we review just a few dozen of the thousands upon thousands of first class programs available – see page 124.

Whatever your ST interests, there's plenty here to keep you busy. Enjoy!

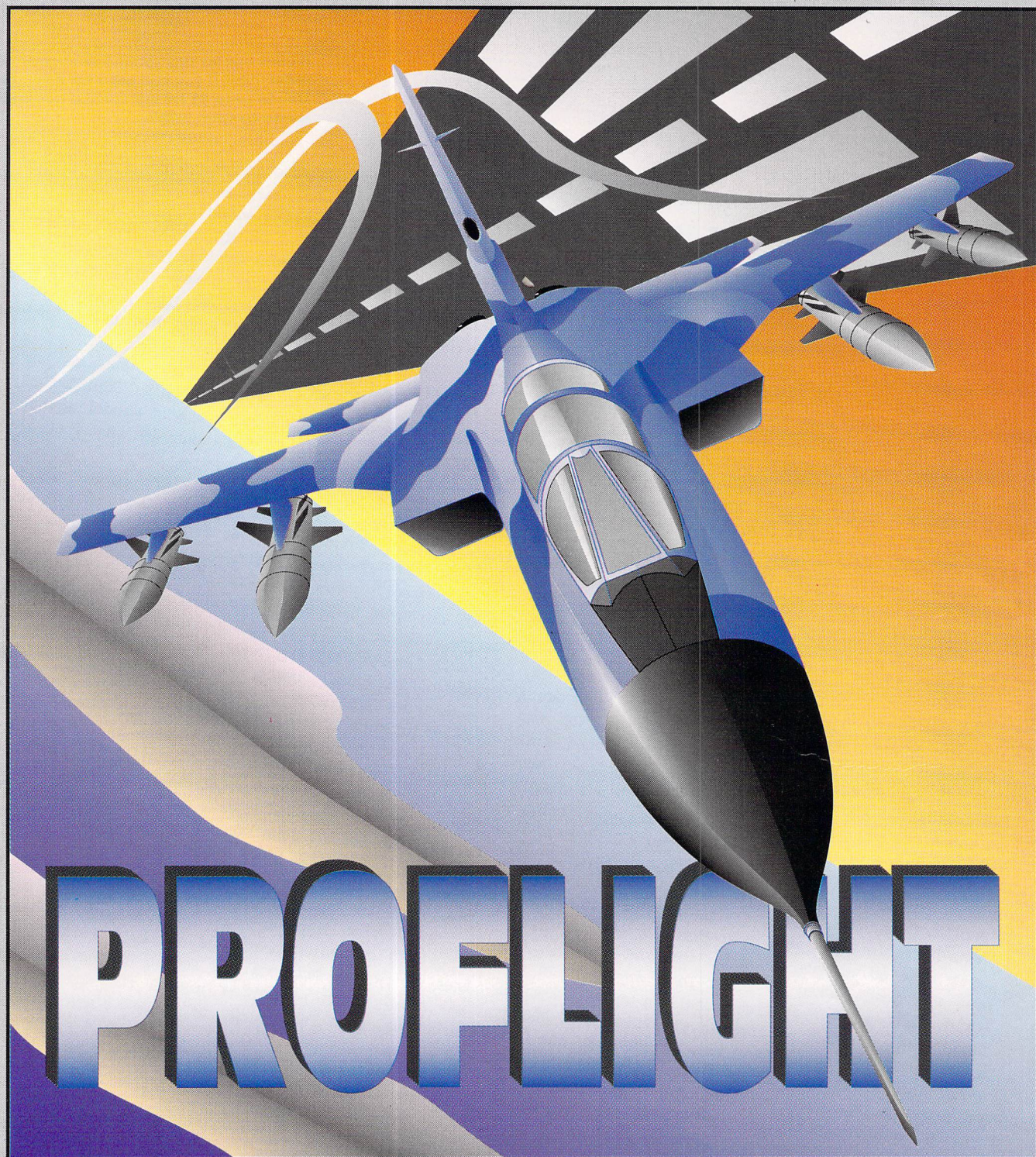
Steve Carey
Editor

ANSWERS TO THOSE VERY TRICKY QUESTIONS

- 1) American Standard Code for Information Interchange
- 2) Musical Instrument Digital Interface
- 3) Random Access Memory
- 4) Red, Green, Blue
- 5) Tramiel Operating System

Got all those right, did you? No technical wordy probs in your life? Then perhaps you'd like to win some dosh for finding what we got wrong or left out in our special jargon-busting feature on page 65. See page 161!

The Tornado Flight Simulator for your Atari ST



HiSoft is delighted to announce, at last!, the immediate availability of ProFlight.

ProFlight; a supremely accurate simulation of the Panavia Tornado military aircraft, a plane that is the fastest aircraft in the world at ground level (Mach 1.2) and one of the fastest at any level (Mach 2.2) with advanced swing-wing technology that gives it a truly multi-role capability. ProFlight uses complex and exact flight equations that allow you to fly this powerful fighter just like its pilots.

Everything is there ... you can fly peaceful reconnaissance missions or roar into full attack with cannons, bombs, heat-seeking Sidewinder and radar-guided Sky Flash missiles.

ProFlight comes complete with a professional 170-page, ring-bound flight manual which details every aspect of flying this exciting aircraft together with a pull-out specification sheet of the Tornado.

ProFlight is available from all good computer stores and costs only £39.95 inclusive (UK only); if you have difficulty locating your copy, please call HiSoft on 0525 718181 and ask to speak to Julie.

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Bedford MK45 5DE UK

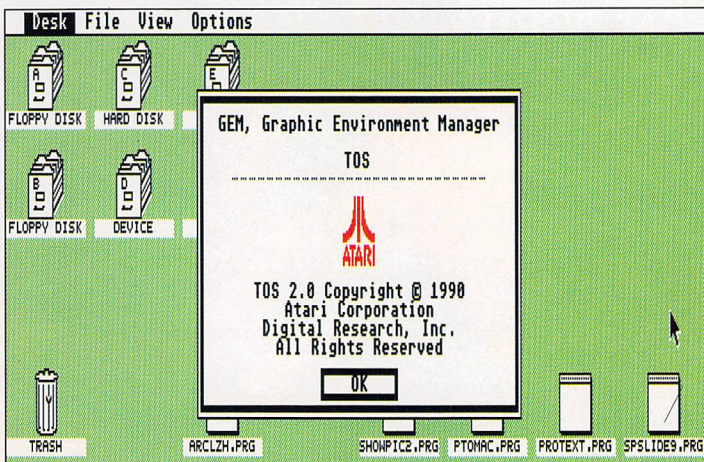
Tel: +44 525 718181
Fax: +44 525 713716

Killer TOS on the loose

by Andrew Hutchinson

An illegally circulated, pirated and potentially dangerous version of the Atari TT operating system has been discovered on British bulletin boards. The software is an early alpha test version of TOS 2.2 which contains few of the features of the full package and could well wreck your hard drive or corrupt your disks.

Participating in an on-line conference, Derek Mui of Atari USA has revealed that the software is definitely "not an official release version." He added that to the best of his knowledge it was "done by an irresponsible person who stole an alpha test version of the Desktop, put in a version 2.0 title in the info box and distributed it." He had a word of warning for anyone contem-



■ This claims to be TOS 2.0, but it's actually a pirated version of TOS 2.2. Don't let it near your ST, or your disks might get corrupted. If you know who's distributing it, contact Atari ☎ 0753 33344

plating using the software: "If you insist on using it, that's fine with us. But don't complain to us that it trashes your files or wipes out your whole partition!"

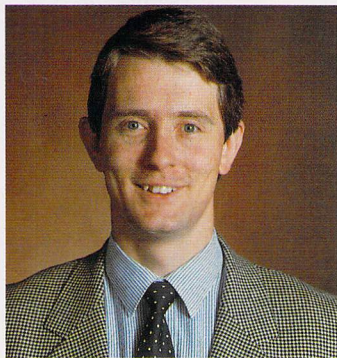
Alastair Burton of Atari UK's technical team told *FORMAT* that there are two pirated versions of the TOS circulating illegally. "One version is very buggy," he said, "but I wouldn't imagine that it's going to be causing too many problems, because there's not much to it." He told us that there was a version 3.00 which had originated from Germany and "which is very nearly a final version, 3.01 being the full version. It uses TT

specific instructions, however, so it's not a lot of use to people."

Peter Staddon of Atari UK was unaware of the illegal TOS before *FORMAT* informed him. "This operating system is an illegal product," he states. "It is a prototype, it's not finished. We would strongly recommend that no-one uses it." He also stressed that Atari take a very dim view of this type of piracy: "it's a very serious piece of software, therefore it's important that it goes out in its correct form. Moreover, if we find that someone is distributing it, we will consider taking legal action." He asks that if you know of people distributing the TOS, you notify him at Atari (☎ 0753 33344).

David Cagle, of the Atari US technical team, has a timely warning for bulletin board owners and users: "If you've had it uploaded onto your board or you downloaded it from a board, delete it." If you've come into contact with this software and it trashes your hard drive, don't expect any sympathy from Atari.

In *STF 17* we inadvertently mixed up our word processor prices. GST Software want £79.95 for a copy of the ever popular *First Word Plus*, while their *Wordwriter* is £49.95. GST ☎ 0480 496789.



■ Peter Staddon, Atari: "If we find that someone is distributing it, we will consider taking legal action"

Condor go a bundle

Condor Computers are hoping for great things from their latest bundle. They've acquired a large stock of Power Computing's excellent 40MByte Series 900 hard drive and are bundling it with *Supercharger 1.4* for the knockdown price of £549.

Supercharger is a PC emulator which sits in its own case and comes complete with 1MByte of RAM. Version 1.4 includes multi-tasking, hot key operation, a program launcher and a technical tool box (whatever that is).

Keen to diversify, the same company are also distributing a pro-

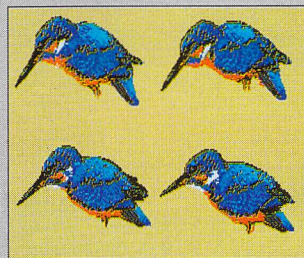
fessional Computer Aided Design program which goes by the name of *CADja*.

This extremely well featured package retails at £299 and enables you to produce high quality designs with the minimum of hassle.

All kinds of arcs, circles, curves and lines can be created and manipulated. Hatching, copying, moving and dimensioning are all possible, and varying pen widths give that professional look.

Look for the full review in *ST FORMAT* soon. Condor Computers Ltd ☎ 0734 810066

Return of the Real Thing



■ The applications possible with the superb *RT Animkits* are limited only by your imagination. School lessons would certainly be a lot more interesting if these animations were part of the lesson

The folks down at RGB Studios have been busy creating animation kits for your ST, to be used in conjunction with *DeluxePaint*. The theme of Volume 2 is birds, 11 examples of which are included on the disk.

Doves, kingfishers, owls, eagles and seagulls are all included, along with scenery sequences. The animation of these creatures is top notch, since they've been created by some top professional artists and animators.

Applications for this type of program extend from the home to the classroom, because they go a long way to explain the mechanics of flying. RGB Studios are promising that the next volume will feature humans. *RT Animkit* volume 2 costs £29.95, from RGB Studios, Gables, Buxted, East Sussex, TN22 4PP.

Softsellers bomb out

One of the largest distributors of ST-related software and hardware has gone into receivership. Softsellers of Ipswich in Suffolk (proprietor: Martin James) ran into financial problems earlier this year and were unable to pay outstanding debts, leaving many ST owners awaiting goods they'll never receive.

The official receivers are warning that nobody should send money off to the company. Anyone owed money by Softsellers should get in touch with the receivers, Patterson and Thompson, 12 Lower Brook Street, Ipswich, in order to get an application form for money recovery. Remember to enclose an SAE.

NET £25 OF SOFTWARE – FREE! SEE PAGE 149

ATF II

ADVANCED TACTICAL FIGHTER II



ADVANCED TACTICAL FIGHTER II — Strategic Frontline Action —

A unique blend of arcade action and mind-bending strategy.
Beyond today's technology — fly into the future with ATF II....

Atari ST/STE, Amiga & all IBM formats. r.r.p £24.99



Incentive release amazing new 3D creator for ST

by Steve Carey

Incentive Software, best known for the 3D game creation system *Freescape*, have revealed details of a revolutionary new package that enables users with no programming knowledge whatsoever to create games and routines every bit as complex and impressive as their own *Total Eclipse* and the *FORMAT* Gold winning *Castle Master* (STF 10: 90%).

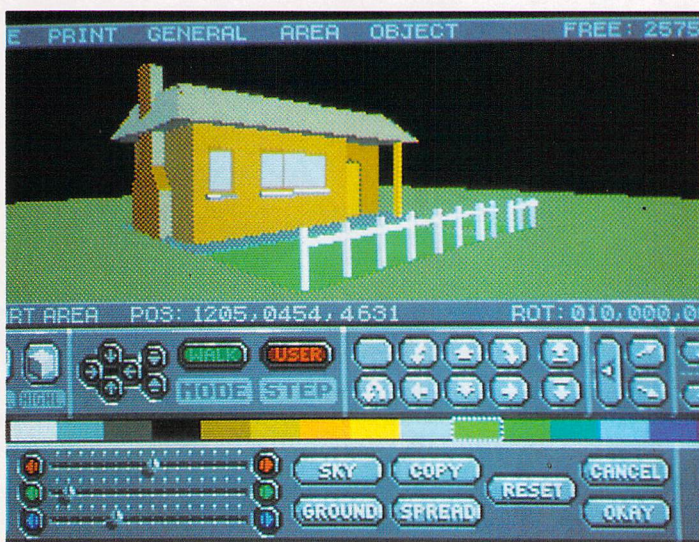
3D Construction Kit, set for an April launch, gives newcomers and non-programmers the power to create solid 3D objects (hence, no doubt, the title) that can be stretched, rotated, suspended, stacked and even given animation effects. Yet the whole system is so user-friendly that it makes most simple art packages look cumbersome.

One obvious use to which the package can be put – but by no means the only one – is the creation of games. If you have played any of the four *Freescape* games – *Driller*, *Dark Side*, *Total Eclipse* and *Castle Master* – the appearance of objects and the general environment will already be familiar to you. Using *3D Construction Kit* you can create complete, stand-alone games that are every bit as complex and entertaining as these, the only limitation being your own imagination.

The best thing about the whole project is that objects, animations and games created with it work independently of the *Construction Kit*, and no licence is required. There's no reason why games should not be good enough for commercial release. The only downside is that it's obvious within about five seconds that your object or game was created with this system.

"This package is so easy to use," Incentive's Andy Tait told *ST FORMAT*, "that you can do amazingly rewarding stuff within minutes. But once you've mastered the easy bits you can progress onto the more complex features to produce environments or complete games."

He is also keen to stress that there will be a complete game and



■ This sickeningly cute little house has been created entirely using the new user-friendly *3D Construction Kit*. Open the door...



And in you go. Using the new kit, you can have as many as 30 different "areas" within a single game or environment

an environment will be included with the kit when you buy it. "I'm looking forward to seeing what people can do with it," he said.

3D Construction Kit, which will cost £39.99, is in effect the *Freescape* object editor made user-

friendly. While the programmers and graphic artists who worked on Incentive's own games had to make do with complicated hex tables and calculations, soon ST owners will be creating the same effects via a remarkably flexible and friendly pull-down menu and point-and-click system.

Apart from game creation, uses for the new kit may include educational design, modelling and urban studies.

3D Construction Kit, due for release in April, is to be published by Domark ☎ 081 780 2222.

■ We shall be reviewing *3D Construction Kit* in depth soon to see whether it lives up to its promise. Stay tuned!

Colour digitising software for ST

Most digitisers work in black, grey and white. This is fine if you fire digitising pandas but not much use if it's the Coldstream guards. DAC Software have produced a nifty program which enables you to produce colour pictures from grey scaled images. *DiviChrome* works with the Vidi ST digitiser from Rombo ☎ 0506 414631, which costs £99.95. The program examines the image and apportions to it shades of colour from a palette of 512. The coloured images can then be saved in Spectrum 512 format. *DiviChrome* costs £19.95 from DAC Software, 8/6 Hay Road, Edinburgh, EH16 4QA.

TCB team get active

■ Not one to rest on his laurels, Anders Nilsson, author of *TCB Tracker*, is putting the finishing touches to version 1.2 of this fabulous music maker. The new version fixes a number of bugs which caused problems for users. Password entry, disk drive access times, pitch bending, replay routines and the MIDI routines have all been fine tuned and Anders promises they all work fine.

■ Coming soon from MPH is a *Tracker* cartridge which enables an ordinary STFM to produce quality stereo sound. The cartridge attaches to the ST via the Centronics printer port, with the handy side-effect that processor time is cut down by about 10%. Sound runs at a very clear 16KHz, compared to the 8KHz of the existing *Tracker*. Phillip Harman, manager of MPH, says he is hoping for a retail price of about £10, adding that "software houses could incorporate routines into their code."

■ MPH are also moving into the world of games production. Drawing on his contacts with demo groups, Harman has contracted a group of French programmers to write a car racing game, to be based on *The Run* demo, featured in *STF 18*. He says the game will be "a cross between *Hard Drivin'*, *Chase HQ2* and *Stunt Car Racer*."



■ How would you like to play a game which looked like this? MPH reckon that they're going to do just that. Watch this space for the review!

■ With new *Tracker* programs appearing by the day you might have thought Anders was worried about having his crown knocked off. However, the Swedish ex-demo writer reckons they've all jumped on the bandwagon too late. For instance, he believes that *Audio Sculpture*, one of the better *Tracker* programs, "is good but it takes too much processor time." He adds that "there were a lot of bugs in it, and most of the features are rip-offs of existing software."

■ MPH Software ☎ 0603 503382

**THERE'S MORE
ST NEWS ON
PAGE 14...**

FLIGHT OF THE

INTRUDERTM



Flight Of The Intruder takes you into the deadliest air combat environment the world has ever known – the skies above North Vietnam.

In 1972, the USAF launched Operation Linebacker. US forces and their South Vietnamese allies are locked in a life and death struggle with the fanatical North Vietnamese Army. You must stem the tide of the North Vietnamese offensive by cutting its vital lifeline to its front line troops.

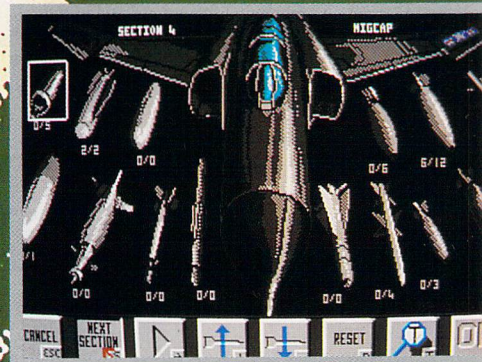
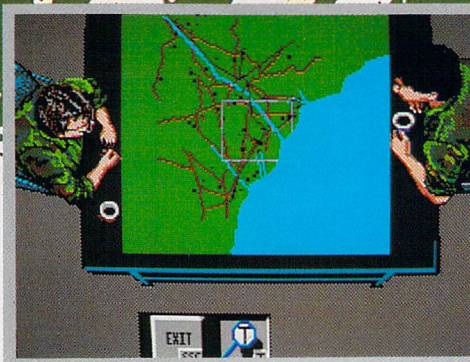
From the US Carriers in the Gulf of Tonkin on "Yankee Station", you must attack a variety of installations defended by surface to air missiles and the MiG fighters of the skillful and determined North Vietnamese Air Force.

Only team work will get you back alive. The "IRON HAND" flights must destroy or suppress the surface to air missiles whilst Combat Air Patrol aircraft circle high above the strike force looking out for enemy aircraft. Finally, the strike aircraft must find and attack the target braving a hail of small arms and anti-aircraft artillery fire at low level. Individual survival is not the only measure of success, it is the success of the mission as a whole that counts – there is no place for seekers of individual glory.

Enemy aircraft featured are the nimble MiG17 and the more advanced supersonic MiG21, capable of out turning any USAF aircraft.

Flight Of The Intruder takes you into the real world of operational flying and mission planning.





FEATURES

Choose between two of the best aircraft that ever flew. The F-4 Phantom is fast, powerful and equipped with highly advanced avionics. It is so flexible that it can perform any type of mission. The A-6 Intruder has the first all weather computer operated weapons guidance system (DIANE) and an outstanding weapons load, both have stood the test of time and are still in service.

- ⊕ Up to 8 friendly and 4 enemy aircraft on screen simultaneously.
- ⊕ 2 different aircraft accurately simulated. 3 different roles: MIGCAP, IRON HAND, or STRIKE.
- ⊕ Realistic mission environment with enemy artificial intelligence.
- ⊕ Switch between friendly aircraft in flight.
- ⊕ Carrier take-off and landing with "MEATBALL" landing aid.
- ⊕ In-flight radio messages with radio message queueing system.
- ⊕ View from all aspects and 14 in cockpit views.
- ⊕ Large numbers of mobile targets including trucks, trains and barges.
- ⊕ Realistic terrain taken from contemporary operations maps including Hanoi, Haiphong and Than Hoa.
- ⊕ Instant "Quickstart" option.



Spectrum HoloByte™

Always intent on doing things in a big way, America recently witnessed the largest computer show of its calendar. The Comdex show, all 2.2 million square feet of it, was held in Las Vegas and attracted thousands of companies and computer enthusiasts. Atari have long been a strong presence at this show, using it on more than one occasion to launch new products. This year was no exception: see box below right.

Interesting new products for the ST were an obvious force on the exhibition floor. Zephyr, the American hardware specialists, were showing their STeFax machine. This tasty piece of hardware combines a scanner, printer, fax and copier. The unit works at a resolution of 200 DPI



■ The Comdex computer show: 2.2 million square feet – and almost as many aching plates of meat?

Comdex show – biggest in the US

with thermal paper for the printer and the copier. It retails in the States for \$1000 (about £500). Bill Yerger, managing director of Zephyr, is currently looking for a British distributor for the product, although he sees Germany as the main market. He also revealed exclusively to *ST FORMAT* that he'll probably be joining Atari really soon as a marketing man, to fill Elie Kenan's shoes. The same company are currently testing their "Sherlock" hardware, an optical character recognition system. Two versions of this are expected to be available: Sherlock Junior at \$189 (£90) and Sherlock Professional at \$789 (£400). Zephyr Inc ☎ 0101 415 845 2000.

Softlogik's *Pagestream 2.0* was in a beta test state. Version two offers improved colour desk top publishing on the TT, and the ST version is expected to sell for \$299. A wide variety of fonts has been added and colour graphics can be incorporated. Deron Kazmeir was tight lipped about a release date for the program but told *FORMAT* that Softlogik Publishing Ltd (☎ 0101 314 894 8608) will be distributing it in this country.

GDOS, the graphic operating system for the Atari, has undergone a complete revamp. Atari have renamed it FSM (Font Scaling Module) GDOS. The old font routines have been replaced with a plush *Ultrascript* scaling routine, meaning that fonts of any size look smooth. What's more, these can now be

smoothly rotated. This means that cheap DTP programs with more than adequate font reproduction can be implemented. Atari may release this as freeware. Atari US ☎ 0101 408 745 2000.

Goldleaf Publishing Inc. (☎ 0101 415 461 5703) were showing the vastly updated version two of their

word processor *WordFlair*. Gribnif Software were demonstrating version 3 of *Neodesk* (reviewed in *ST* 18 and awarded a massive 95%).

Notable Atari personalities at the show included Jack, Sam and Garry Tramiel, along with General Manager Gregg Pratt, and the usual assortment of technical staff.

■ Surprise of the show for Atari personnel came at a concert given by the evergreen Beach Boys. Bruce Johnston of the band paid tribute to the ST in the corner of the stage and proceeded to dedicate "Don't Worry, Baby" to the company, saying "This one's for you, Atari." *stf*

New Atari products a big hit at the Comdex show



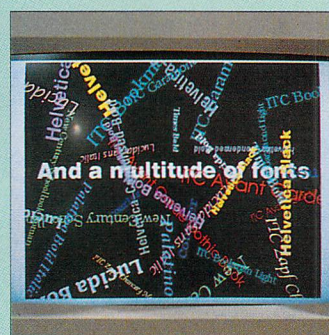
■ The mould-breaking Mega STE

The Mega STE, with its scorching specification, was a massive hit at the show. Atari's decision to bundle the base unit with a 40MByte hard drive was seen by many to be one of the best moves the company has made. They have effectively, through aggressive pricing, bridged the gap between the business and the recreational computer markets. What's more, the standard Atari peripherals have all undergone transformations.

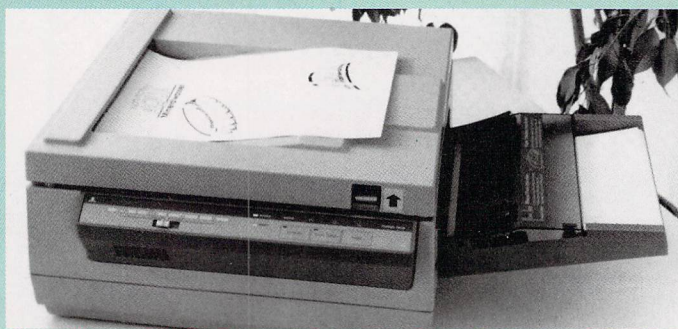
The SC1224 monitor has been replaced by a Philips-built unit named the SC1435. This is a colour stereo monitor with a large 15 inch

screen (the SC1224 was a 12 inch monitor). A green tint button has been added, making word processing a joy, and a stereo headphones socket has been included for quiet gaming. The TT's keyboard, a very high quality micro switch affair, has also been well received.

The old Atari laser printer, the SLM804, has been replaced by the SLM605, to retail at \$1,300 (about £680). Print speed has been significantly improved: the unit now operates at about six pages per minute, at a resolution of 300x300 pixels.



■ The new SC1453 monitor



■ Atari's new SLM605 laser printer: significantly faster printout

MIGHTY BOMB JACK™

The character Mighty Bomb Jack is shown from the chest up, wearing a silver, futuristic helmet with a large, curved horn on the right side. He has a confident smile and is holding a large red bomb with a lit fuse in his left hand. Sparks are flying from the bomb's base and the horn of his helmet. The background is dark.

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elite

ST charts

This month's guest presenter: Mrs Thatcher – remember her, anyone? – booking now for weddings and funerals, no turning back a speciality. Take it away Thatch...

ATARI ST GALLUP SOFTWARE CHARTS

This is getting boring. Even Queen and Bohemian Rhapsody didn't spend as long at number one as Microprose and *F19 Stealth Fighter*.

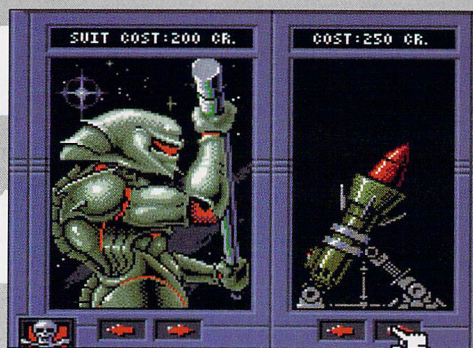
Not that it doesn't deserve to be there, of course; it takes some kind of wonderful game to merit an *ST FORMAT* 96% rating, and its chart performance has justified our outrageously high mark.

Still, there's an interesting challenge coming up on the inside from Gremlin, though it's doubtful whether it can get to the finishing line before Those Turtles arrive to make their reptilian presence felt.

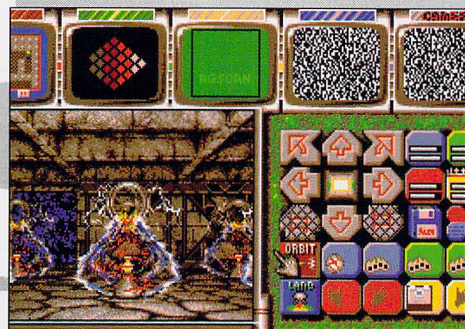
Microprose stamp their mark all over the charts, with two in the top ten and four in the top 15 (Microstyle's one of theirs too). But there's a pair from Virgin coming in strongly at 10 and 11.

Note, though, how many publishers struggled to get their really big games into the shops in time for the big push...

■ Main chart: last month's position in brackets; *STF* refers to issue and score of review in *ST FORMAT*. These full price and budget *ST* charts are compiled and supplied by Gallup.
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■ Straight in at eight, *Supremacy*, a *FORMAT* Gold – we can spot 'em, can't we?



■ Storming up to six is *Captive* – for many, quite simply *the* game of 1990



■ But still at number one, apparently stuck there forever, is *F19*, Microprose's corking and inappropriately conspicuous flight sim

ST BUDGET TOP TEN

- | | |
|----------------------------------|--------------|
| 1. <i>Treasure Island Dizzy</i> | Codemasters |
| 2. <i>Advanced Fruit Machine</i> | Codemasters |
| 3. <i>Italia 90</i> | Codemasters |
| 4. <i>Targhan</i> | Action 16 |
| 5. <i>Operation Neptune</i> | Smash 16 |
| 6. <i>Tracksuit Manager</i> | Hitec |
| 7. <i>Hitchhiker's Guide</i> | Mastertronic |
| 8. <i>Captain Blood</i> | Smash 16 |
| 9. <i>Yogi's Great Escape</i> | Hitec |
| 10. <i>Iron Tracker</i> | Hitec |

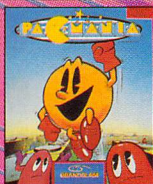
* 15, *Gunship*: before our time, but rated specially by Mark Higham, who knows a thing or two about games.

** 18, *Wheels of Fire*: not reviewed, but an average-to-OK compilation that was very nearly called *Turbocharged Nutter Bastards Simulator* (yes, really)

- | | | | | |
|----|------|------------------------------|------------------|----------------------|
| 1 | (1) | F19 STEALTH FIGHTER | Microprose | £29.99 - STF 12: 96% |
| 2 | (28) | LOTUS TURBO CHALLENGE | Gremlin Graphics | £24.99 - STF 18: 86% |
| 3 | (-) | POWER PACK | Beau Jolly | £24.99 - STF 17: 88% |
| 4 | (2) | KICK OFF 2 | Anco | £24.99 - STF 14: 92% |
| 5 | (-) | M1 TANK PLATOON | Microprose | £24.99 - STF 17: 84% |
| 6 | (21) | CAPTIVE | Mindscape | £24.99 - STF 16: 93% |
| 7 | (3) | SHADOW OF THE BEAST | Psygnosis | £34.95 - STF 17: 83% |
| 8 | (-) | SUPREMACY | Virgin | £29.99 - STF 18: 90% |
| 9 | (14) | TEAM YANKEE | Empire | £29.99 - STF 16: 84% |
| 10 | (-) | GOLDEN AXE | Virgin | £24.99 - STF 18: 82% |
| 11 | (-) | SUPER OFF-ROAD | Virgin | £24.99 - STF 19: 68% |
| 12 | (4) | SHADOW WARRIORS | Ocean | £24.99 - STF 18: 58% |
| 13 | (30) | GREMLINS 2 | Elite | £24.99 - STF 18: 70% |
| 14 | (10) | INT. SOCCER CHALLENGE | Microstyle | £24.99 - STF 15: 85% |
| 15 | (-) | GUNSHIP | Microprose | £24.95 - STF 90%* |
| 16 | (-) | PLATINUM | US Gold | £24.99 - STF 17: 85% |
| 17 | (-) | CORPORATION | Core Design | £24.99 - STF 18: 88% |
| 18 | (-) | WHEELS OF FIRE | Domark | £29.99 - STF 69%* |
| 19 | (-) | LOST PATROL | Ocean | £24.99 - STF 18: 88% |
| 20 | (-) | F29 RETALIATOR | Ocean | £24.99 - STF 13: 76% |
| 21 | (11) | Cricket Captain | D&H Games | |
| 22 | (15) | Turrican | Rainbow Arts | |
| 23 | (-) | St Dragon | Storm | |
| 24 | (-) | Soccer Mania | Addictive | |
| 25 | (-) | Hollywood Collection | Ocean | |
| 26 | (31) | Nightbreed (IM) | Ocean | |
| 27 | (-) | Back to the Future 2 | Mirrorsoft | |
| 28 | (-) | Monty Python | Virgin | |
| 29 | (36) | Fun School 3 (5-7) | Database | |
| 30 | (-) | BSS Jane Seymour | Gremlin | |
| 31 | (29) | World Cup Soccer '90 | Virgin | |
| 32 | (37) | Batman - The Movie | Ocean | |
| 33 | (-) | Chase HQ | Ocean | |
| 34 | (-) | The Spy Who Loved Me | Domark | |
| 35 | (33) | Fire and Forget 2 | Titus | |
| 36 | (-) | Impossamole | Gremlin | |
| 37 | (-) | Dungeon Master | Mirrorsoft | |
| 38 | (32) | Rick Dangerous 2 | Microstyle | |
| 39 | (-) | Last Ninja 2 | System 3 | |
| 40 | (-) | Championship Run | Impulze | |

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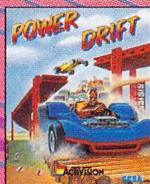
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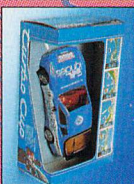
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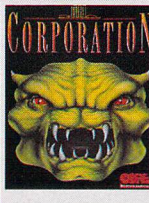
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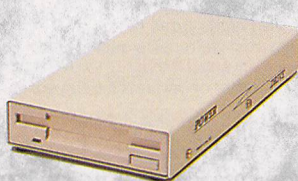


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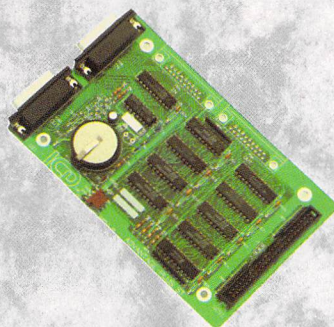
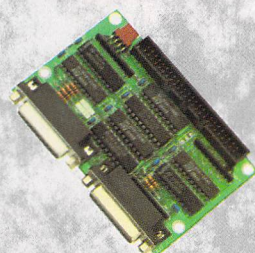
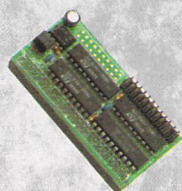
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v/z

Virgin

The comic has achieved cult status because of its crude jokes and often comically obscene stories. Now there's a computer game which looks set to do exactly the same thing. The game is a race between Johnny Fartpants, Biffa Bacon and Buster Gonad. There are five levels in the game, each of which makes up a separate location for you to race over – countryside, beach, building site, town and disco. There are different obstacles for each of the levels and the characters each have their own special abilities. Johnny can fart his way over obstacles, Biff can punch people's lights out and Buster has a wheelbarrow to carry his unnaturally large – er, gonads. The game is being written by Probe (Fnarr, Fnarr), who were responsible for coding *Outrun* and *Black Tiger*.



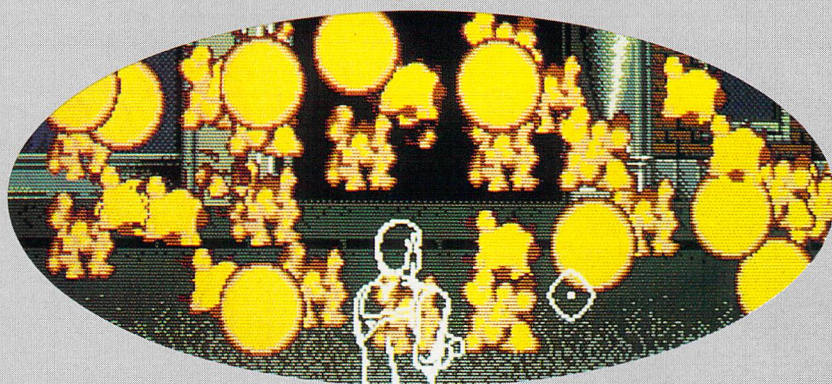
previews

Just when you thought it was safe to shut your eyes and finally go to bed, there's another host of games on the horizon ready to keep you up all night. Mark Higham picks out the potential winners vying for your hard-earned cash

PREDATOR 2

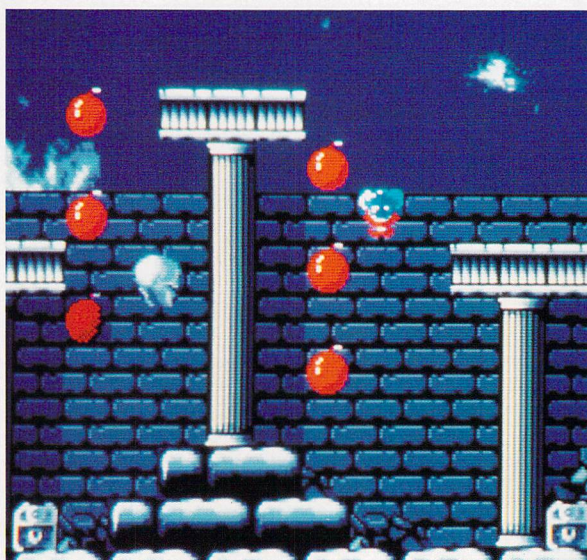
Imageworks

A sneak preview of Mirrorsoft's latest licence tie-up. *Predator 2*, the film, is due out at the end of Spring and at the same time Mirrorsoft are going to be releasing their arcade game. It's set in the year 1995, and you're the cop caught in the middle of a drug war on the Los Angeles streets. Shoot-'em-up action and 3D sideways scrolling are promised – whatever that may mean. With so many licence deals coming from Mirrorsoft over the last few months, what we all want to know is what's happened to their quality original releases?



MIGHTY BOMBjack

Elite



Ever been to a Bombjack party? The idea is to run round Belfast defusing bombs and the last one to get blown up is the winner. Elite are basing a computer game around this enormously popular party trick. *Mighty Bombjack* comprises a series of levels littered with bombs. The plan is to find the fizzing bomb and run over it. As soon as one fizzing bomb has gone, another of the bombs on screen begins to fizz and you need to pick it up before it explodes. *Mighty Bombjack* promises to come with 17 levels incorporating over 250 screens. Unfortunately, you don't get a free sniffer dog.



HILLBILLY MOONSHINE RACERS

Millennium

Racing games are changing. The bog-standard racing game is no more; now a car game must have something different to be a success. Millennium have given the standard racing game a complete overhaul to come up with *Hillbilly* – which doesn't even sound like a racing game. Their first change to the common scenario is to ditch the souped-up racing car. Instead, you play with a run-down truck.

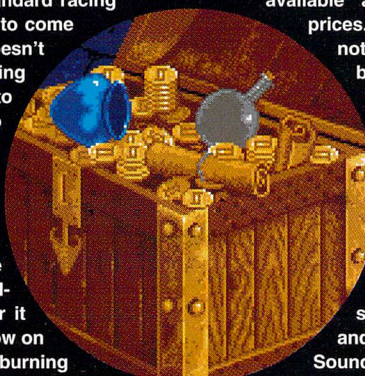
Another change (and it's a pretty radical one) is that this isn't a race. The objective instead is to collect moonshine and deliver it to your clients. If you run low on fuel you can always start burning the moonshine, but if you don't deliver enough you don't get paid.

Whenever you get back from a trip you have the option to visit a shop. This enables you to buy new bits and pieces to equip your car – for example, a pair of fluffy dice to make the sheriff laugh or new wheels to replace

those lost in your travels. One of the most important purchases is a map detailing the route you need to take. There are three maps available at increasingly extortionate prices. The most expensive map not only shows you the route but also pinpoints any Police roadblocks along the way.

Hillbilly Racers has an excellent pedigree. It's been programmed by the same team who wrote *Continental Circus* and *Chase HQ*, so the road movement is smooth and realistic. Heaps of roadside sprites, such as fuel stations and hotels, liven up the action. Sound effects are courtesy of Justin Scharvona (*Hero's Quest*) and promise to include sampled banjo noises guaranteed to make you turn the volume down.

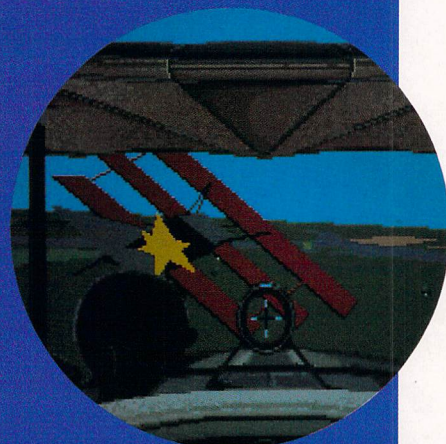
You'll have to wait until the end of March to get your hands on the game – but if the early demos are anything to go by, *Hillbilly Moonshine Racers* could be worth the wait.



BLUE MAX

Mindscape

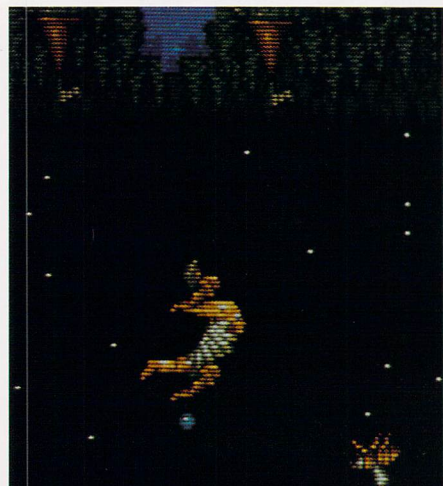
Flight sims are where it's at right now. You spent the Autumn months playing *F-29*, Winter was the time for *F-19* and *Blue Max* could be the flight sim you're playing through Spring.



INSECTS IN SPACE

Hewson

A typical B-movie name for an unusual shoot-'em-up. Baby-snatching killer bees are stealing human infants for their own perverse entertainment. Using your laser-powered eyes, you need to blast the bees before they can annihilate the human race. Lock up your children! **stf**



No More 'Out Of Memory' Headaches

With Frontier Software's XTRA-RAM, you can do away with those nasty 'Out Of Memory' messages which seem to come up just when you are in a hurry to finish your latest creation - whether it's a page of desktop published brilliance, a piece of superb artwork or a spreadsheet which contains all of the information which your bank manager has been demanding since last week.

• No Need To Send Your ST Away

Upgrading the RAM memory of your Atari ST (whether it's a 520ST, 520STM, 520STFM, 1040STF, 1040STFM, Mega 1ST or Mega 2ST) usually means sending your ST away or doing a large amount of delicate nerve-racking soldering yourself. Frontier's XTRA-RAM is installed by you, in your own home or office *without* the need for any soldering whatsoever (The XTRA-RAM even fits STs with surface-mounted MMU^{oo} or RAM chips)

• Easy To Install - No Soldering

The installation process takes around an hour (the XTRA-RAM simply plugs into two places inside your ST) and is carefully explained in a detailed 32 page manual which is written with the non-technical ST user in mind. If you have any problems during the installation process, Frontier's technical staff are always available on the phone to offer assistance.

• No Need To Stop At 1MB

Most RAM upgrades leave you with your 1/2 MB ST upgraded to 1MB and that's it! If you need any extra memory at a later date you are expected to go out and buy a Mega ST - Not so with the XTRA-RAM. The XTRA-RAM has been designed to take two sizes of industry-standard RAM memory chips. With sixteen 256Kbit RAM chips the XTRA-RAM will upgrade your 1/2 MB Atari ST to 1MB, making it totally memory compatible with the 1040ST and Mega 1ST. When you decide that you need more memory you can change those sixteen RAM chips for sixteen 1Megabit chips (again with no soldering whatsoever) in around ten minutes and your ST will be expanded to 2 1/2 MB (520ST, 520STM, 520STFM, 1040STF, 1040STFM and Mega 1ST will be expanded to 2 1/2 MB, Mega 2ST will be expanded to 4MB).

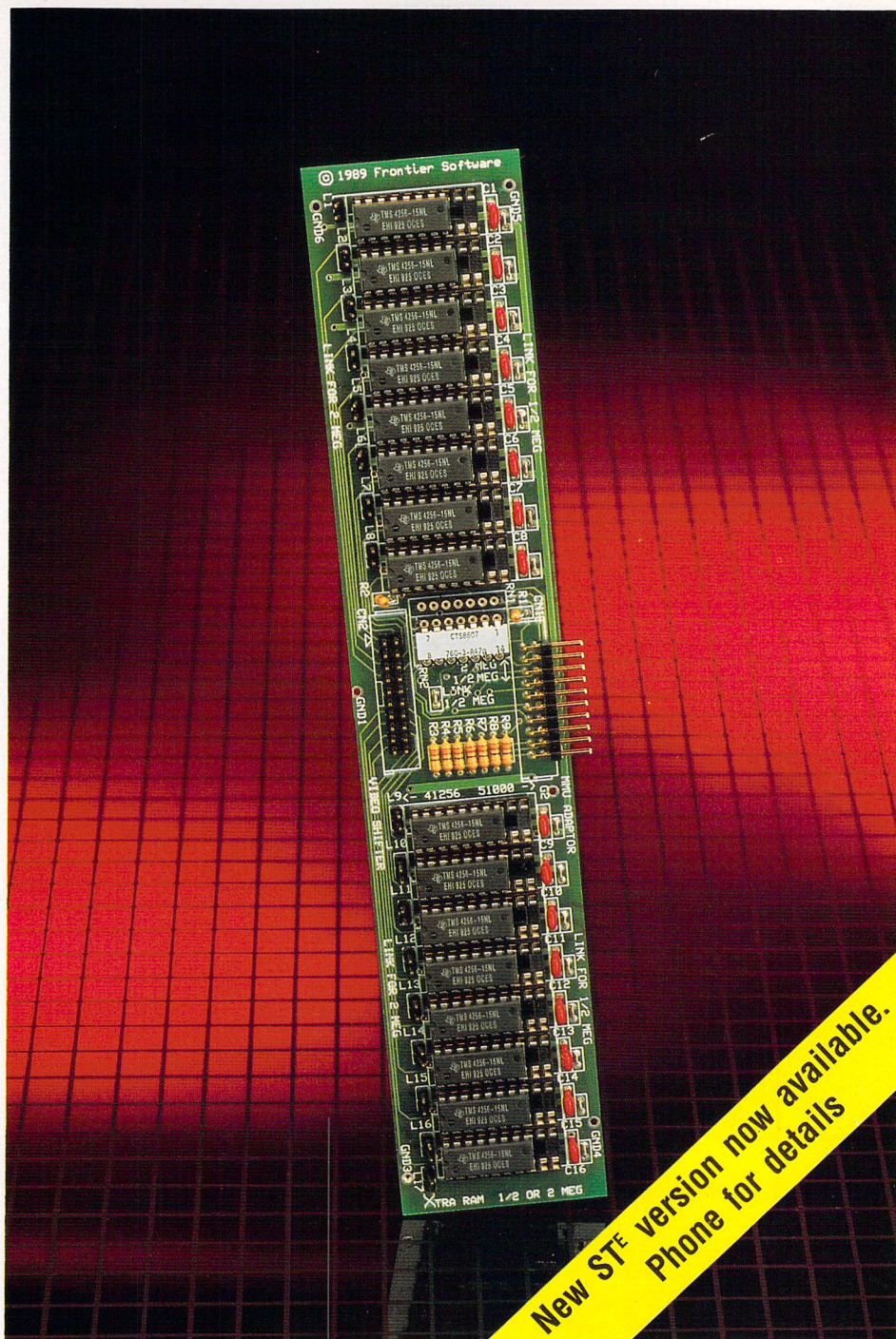
• Totally Compatible

The extra RAM memory that the XTRA-RAM gives you is totally compatible with all of your Atari ST programs. The ST's memory controller chip 'logs' in the extra memory and makes it available for your programs. You will automatically get more memory for DTP, word processing, MIDI, running the Atari Laser printer and everything else that you use your ST for.

• Software Included

Every XTRA-RAM upgrade is supplied with a free

^{oo}The XTRA-RAM must be fitted to STs with surface-mounted MMU chips by Frontier Software. You can fit the XTRA-RAM to STs with surface mounted RAM chips with no soldering as long as the MMU and Video Shifter chips are in sockets. Call Frontier for more details.



RAM testing program (so that you know with *certainty* that your installation has worked), RAM disk and printer spooler software.

• Satisfaction Guaranteed

The XTRA-RAM is supplied under Frontier's ten day money back guarantee, which means that if you don't like the XTRA-RAM, for any reason, you can return it for a full refund within ten days of purchase. The XTRA-RAM also carries a full twelve months' guarantee.

• Available With Or Without RAM Chips

Frontier supply the XTRA-RAM in three ways:

- (1) Unpopulated (with no RAM memory chips, so that you can purchase your own),
- (2) Populated with 16 256Kbit RAM chips (taking any 1/2 MB ST to 1MB. This, of course, can take your ST to 2 1/2 MB whenever you wish simply by changing to 1Megabit RAM chips)
- (3) Populated with 16 1Megabit RAM chips (to take any keyboard ST or Mega 1ST to 2 1/2 MB or any Mega 2ST to 4MB).

• Prices

XTRA-RAM Unpopulated	£64.99
XTRA-RAM Populated to upgrade a 1/2 MB ST to 1MB (can later upgrade to 2 1/2 MB simply by changing RAM chips)	£79.99
XTRA-RAM Populated with 16 1Megabit RAM chips to upgrade keyboard STs and Mega 1STs to 2 1/2 MB and Mega 2STs to 4MB	£189.99

All prices include VAT. Please add £2.30 postage and packing to all orders under £120.00. Frontier accepts payment by Visa or Access.

Available from your local dealer, or direct from:



Frontier Software

P.O. Box 113, Harrogate, North Yorkshire HG2 0BE.
Telephone (0423) 567140/530577. Fax (0423) 522874.

start here!

Forget the manual – Richard Monteiro introduces the basics of using your ST

Are you one of the many thousands who got an ST for Christmas? Perhaps you've had yours for a while but still find the whole thing a mystery and the manual not much help. Well, look no further! Throughout this issue *FORMAT* answers some of the most common questions we get asked – but let's begin with the basics.

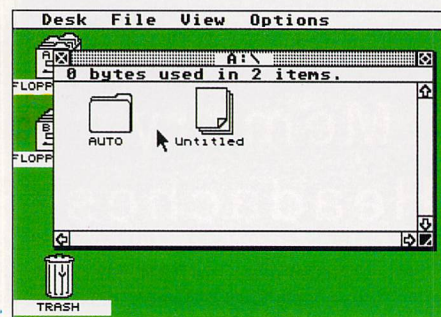
SWITCHING ON

You've plugged in and switched on. The ST's power light is on, its drive light flickers... but

there's still nothing on your monitor or TV. Have you been landed with a duff machine?

Don't give up just yet! Leave the ST in this state for long enough and you're greeted with the Desktop, a green background with several tiny pictures on it and a few odd words at the top. On a black and white TV or Atari's high resolution monitor (SM124) you get the same display, except in black and white.

Why the delay? When the ST is switched on or reset, it looks for a disk in the internal floppy drive. If you don't put a disk in the drive immedi-



■ Any executable program with a .PRG extension contained inside an AUTO folder automatically runs when you reset your ST or switch it on for the first time – see the section on “Booting Up” below

ately after switching on, the machine takes around 20 seconds to realise it's indeed missing a disk and ought to get on with displaying something useful before it gets chucked in the bin.

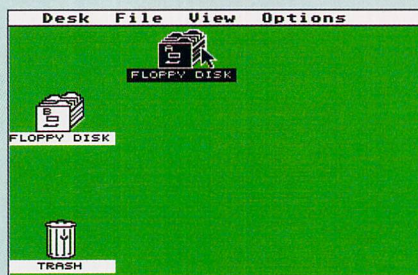
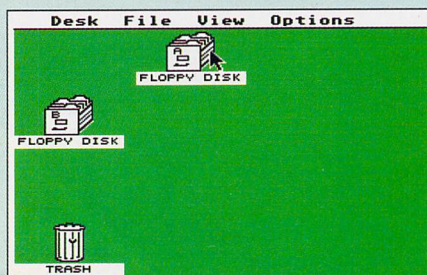
Try it. Switch the ST on and don't place anything in the drive.

Of course, you won't want to do this all the time – it takes far too long to get to the Desktop this way. What you need is a Boot disk.

“SELECTING” AN ICON ON THE DESKTOP

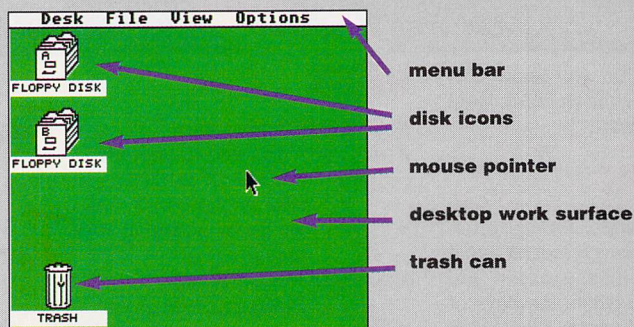
■ With the pointer over the icon you wish to select, simply press the left mouse button once. The selected item appears

in reverse shading or inverse. To “deselect” or cancel a selection, simply click on an empty area of Desktop



THE GEM DESKTOP: WHAT IT ALL MEANS

The standard elements of the Desktop are present every time you switch on your ST and get to the Desktop – though the icons may not necessarily be in the same place: some programs rearrange them, and you can drag them to a new location (see “Dragging” on page 25)



■ If you find yourself puzzled by any techie terms, just turn to *FORMAT*'s special Jargon-busters section, starting on page 65, for a quick explanation of all those buzzwords

Desk File View Options

The menu bar gives you access to drop-down menus. Each heading (Desk, File, View, Options) has its own menu. See page 27 for a complete explanation of some of the facilities you can put into operation from here

The filing cabinet-like drawers, labelled FLOPPY DISK, represent disk drives. Okay, so you've only got one drive and the Desktop shows two. Where is the mysterious

drive B? Fear not! Unless you actually have a second floppy drive attached, everything you try to do on the drive B icon simply results in drive A springing to life



The trash can icon is a probably lot more obvious than the filing cabinet. The rubbish, in this case, is any unwanted items from your disks



This arrow shows your position on the Desktop. Simply move the mouse and the pointer moves with it

BOOTING UP

Inserting a disk into the ST when you switch on or reset has a different result depending on the information stored on the disk.

■ A formatted disk (see “File” commands, page 27) containing no files causes the Desktop display to appear very quickly indeed.

■ Inserting a non-formatted disk at the start causes the ST's Desktop to take more than 20 seconds to appear, and also results in the ST complaining that data on the disk is damaged.

■ Insert a disk containing an AUTO folder and the ST automatically runs or starts the program contained within the folder. Depending on what this program is, you may be returned to the Desktop once it's done its business. For more on the AUTO folder, see page 135.

■ If the disk you insert contains something called a DESKTOP.INF file, unusual things might happen – like windows appearing on the Desktop, pictures or icons showing up in odd places, and the whole Desktop appearing to be a different size – see “Save Desktop”, page 28.

■ Most games automatically run when you insert them and reset your ST. Generally, games have a special code located on the boot sector of the disk – the part the ST checks straight away – which informs the ST of the whereabouts of the game on disk. Things get rather involved when dealing with the disk boot sector: let's just say that the majority of programs that make use of this do so to prevent prying eyes from seeing what makes them tick.

TOS AND GEM

Well, you've got to the Desktop. What next? Technically, the screen you're now looking at is called the GEM Desktop. GEM stands for Graphics Environment Manager, which is part of the ST's operating system. The operating system (TOS) is the brain of the ST, controlling all the machine's functions. GEM is the part of the operating system you get to see and interact with. Graphically, the GEM Desktop is designed to resemble an office with filing cabinet drawers, a work surface and rubbish bin – see box at left.

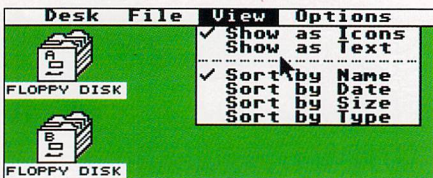
MOUSE TALES

Your mouse is the easiest way of communicating with your ST. It attaches itself via its tail to the ST's mouse/joystick port, labelled 0.

Move the mouse on a hard flat surface and you can position the pointer anywhere on the Desktop. Touch the menu bar with the pointer and a menu drops down. That's why they're called drop-down menus. To get rid of a menu, move the pointer onto an empty piece of Desktop and press the left mouse button once. This action is called **clicking**. Clicking on an icon **selects** it – see the box on page 24.

Ensure there's a formatted disk in the drive and try this: move the pointer over floppy icon A and press the left mouse button twice in quick succession. This is called **double-clicking**. You've got to do this quickly, or the floppy drive A icon remains highlighted and nothing else happens. If you do things properly, a **window** displaying the contents of your disk appears – see the box on this page.

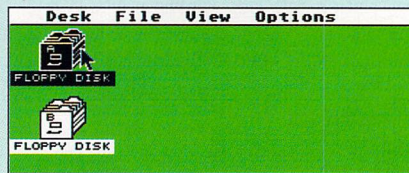
Reset the ST. There is another important mouse operation for you to try. Move the pointer till it's roughly in the centre of the screen. Press the left mouse button and hold it down. Move the mouse so the pointer moves to the right and down. A rubber band-like box appears. This is useful for making multiple selections. Try this: move the pointer so it lies just above the floppy drive A icon, then press and hold the left mouse button. Move the pointer straight down so the rubber band covers both floppy drive icons either wholly or partly. Let the mouse button go and both drives are selected.



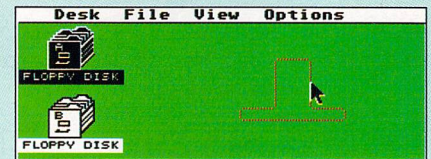
■ Position the mouse pointer over any heading in the menu bar and the drop-down menus (you guessed it!) drop down

DRAGGING

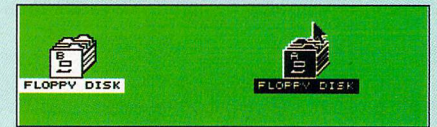
No, dragging isn't anything to do with getting your ST into the next room: it's a way of moving an icon or file to another location on the Desktop. This is useful for instance when you want to open a window on-screen but still have access to that particular icon.



■ Select the icon you wish to move by pressing and holding down the left mouse button when the pointer is over it. The icon changes to a reverse image to confirm that it has been selected



■ Still holding down the mouse button, move the mouse in the desired direction. A ghost outline of the selected object accompanies the pointer on its travels around the screen



■ Once at your destination, release the mouse button. The item you've dragged automatically drops at the pointer's last resting place

KEYBOARD SHORTCUTS FOR COMMANDS

Sure the mouse is fun, but sometimes it's faster to use the keyboard – and it saves you moving your pointer all over the screen. GEM, the Graphics Environment Manager which enables you to interact with your ST, has keyboard alternatives for most mouse movements.

Alternate + arrow or cursor key – moves the mouse pointer in the direction of the arrow. Note that both keys must be held down simultaneously.

Alternate Shift + arrow or cursor key – moves the pointer in the direction of the arrow in very fine pixel increments.

Alternate Insert – the same as a left mouse button click.

Alternate Ctr/Home – the same as a right mouse button click.

Alternate Help – sends the image on screen to the printer. If no printer is present the ST hangs for around 20 seconds.

Esc – pressing this key when a window is opened results in the contents of the window being updated. Useful, for instance, when you swap a disk and wish to quickly see the contents of the disk in an already open window.

Q or Control C – when viewing a data file on-screen you can return to the Desktop by pressing either of the two key combinations.

Return or Enter – rather than clicking on the OK message which appears in countless dialogue and alert boxes, press either of these keys. In general the item in an alert box highlighted with a bold border is the one that is actioned when you press Return.

If you have a machine fitted with TOS 1.4 or higher – this includes all STEs, STFM's and new STs – you have the following as well. Control Alternate Delete – resets the ST. Has the same effect as hitting the reset button at the back of the machine.

Control Alternate right Shift Delete – cold resets the ST. The same as switching on the ST for the first time.

OPEN UP A WINDOW AND REACH INTO THE WORLD OF THE ST

Most of the action takes place not on the Desktop itself but within windows. These sit on the Desktop and display the contents of a disk. Double-click on a drive icon and (provided there's a formatted disk in the drive) a window appears on-screen. Up to four windows may be displayed at once, holding the directories of various disks and folders, though only one window can be active at any time. You can tell which

window is active by its shaded move bar (that's the bar along the top of the window) and the fact that it's the one in front, not overlapped by any others. The active window is the only one whose contents you can select, delete or copy. Clicking the mouse button while the pointer rests over a window causes that particular window to come to the front and become the active one.

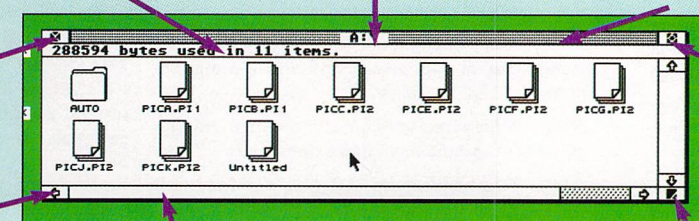
Status or information line: shows how much disk space is used and how many items are stored on disk

Disk identifier: tells you the drive and directory you're looking at

Move bar: like icons, windows can be moved anywhere on the Desktop. Unlike with icons, though, you can drag a window only by a small area at the top of the window

Close icon: press this and the window is history – till the next time you open it

Scroll arrow: causes the hidden contents of the disk to move into view



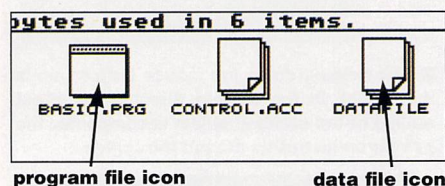
Scroll bar: operates much like the scroll arrow except it can be dragged to the required position faster. Scroll bars are only present if a window is active and not its full size

Size icon: click and hold the left mouse button over this icon and drag the mouse in the desired direction – down to lengthen the window, up to shorten it, right to widen it, left to narrow it. A ghost outline of the window follows the mouse pointer. Release the button to set the new size

Full icon: a click on this expands the window to full screen size. Clicking on the icon a second time returns the window to its previous size

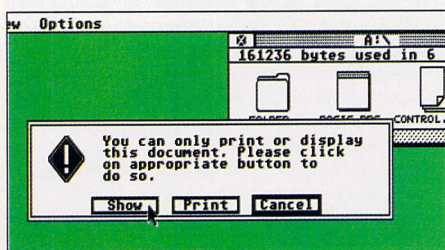
FILES

Your ST stores two types of files on disk: program files and data files. On the Desktop these files are represented by the icons below.



The icon that looks like a miniature Desktop is the program file icon; it represents an application that you can run by double-clicking on it. These are usually applications like word processors, graphics packages, and so on.

The icon that looks like a stack of paper with one corner folded over is the data file icon. Data files contain information used by applications – for instance, a letter produced with a word processor, a program created with a programming language, a picture designed with an art package. You normally have to run the appropriate application to get at these files; double-click straight on a data file and if you have installed the application it runs with the document automatically opened. In most instances, though, you simply get the alert message below.



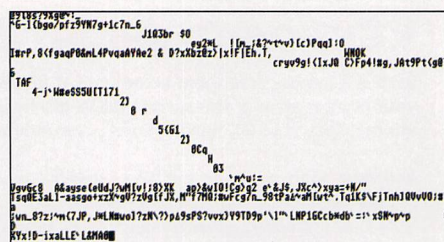
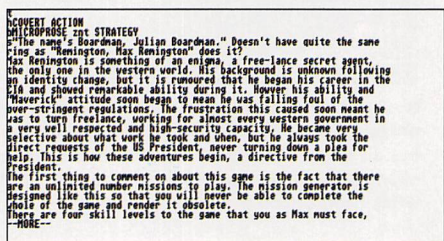
Click on "Show" or press Return to display the document on screen. Any readable text is displayed, and when the screen fills with text you see the prompt MORE. Pressing Return displays another line; hitting the space bar displays the

next screenful of text. Once the whole file has been displayed a message proclaiming END OF FILE appears. At any time during the display press Q or Control C to return to the Desktop.

Select "Print" to send the document to a printer. Printing can be stopped by pressing Q or Control C.

Choose "Cancel" to return to the Desktop.

Not all data files contain readable text. You may see spurious characters and numbers, hear the occasional beep and witness strange screen



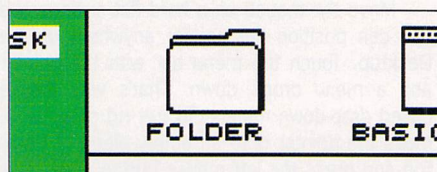
■ ASCII text documents (top) appear on screen in an ordered, intelligible manner. The result of viewing other documents is always uncertain, but it's never boring

flashing. Don't worry, you can't damage your ST; simply exit from the "Show" option to return everything to normal.

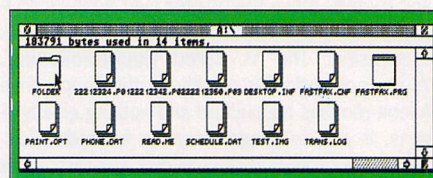
FOLDERS

Folders, which look like the manila variety tucked inside most filing cabinets, are part of your ST's filing system. They provide you with a way of keeping related files (or even non-related ones, if you're that way inclined) together. They can hold program files, data files and even other

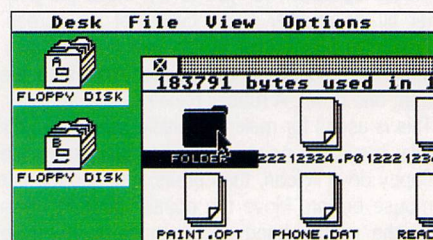
folders – up to a limit of eight levels of folders within folders. Double-click on a folder and you can open a window just for it, so you can view the items contained within.



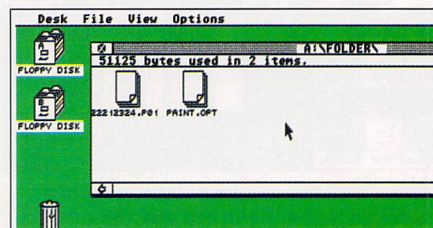
■ The folder icon looks like, er, a folder, really. It groups files or other documents under a single heading of your choice



■ A typical disk directory, consisting of files and folders, shows you what's where



■ Just as you do with a file, you simply double-click on a folder to open it...

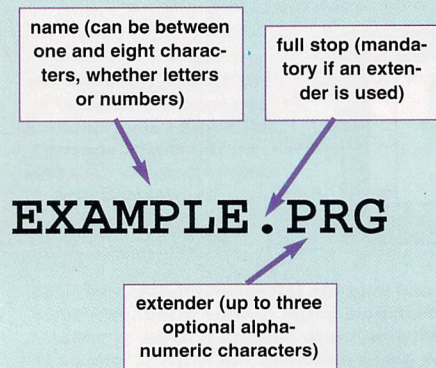


a new window with the folder's name in the disk identifier appears on the Desktop

WHAT'S IN A NAME? QUITE A LOT, IF YOU KNOW WHERE TO LOOK

Let's start with the obvious. Filenames are the names given to files. New files can be supplied with names and existing files can have their names changed. Folders too have names, and virtually everything that applies to filenames also applies to folder names.

A filename comprises two distinct parts: the name and the extender.



Many applications use specific extenders to represent certain types of data files. Similarly, GEM requires applications to have specific extenders.

APPLICATIONS

.ACC – desk accessory. This can't be run in the normal way. It loads into memory when you switch on or reset the machine and is available from the Desk menu (see *DESKTOP*, page 135).

.APP – GEM application. This rare type of file makes use of windows, icons and the mouse pointer.

.PRG – a favoured version of the above. Nearly all GEM programs have this extension.

.TOS – TOS application. TOS files don't require GEM and all the things which go with it; windows, icons, the mouse...

.TTP – a TOS application that expects some typed parameters before it can run. Double-click on a file of this sort and a dialogue box – a specific sort of window – appears, requesting input.

DATA FILES

.ASM – see .S.

.BAS – data file produced with a BASIC programming language like *1st BASIC* or *ST BASIC*.

.HLP – a help file which could contain information on using an application.

.IMG – a bit image graphics file. Images in this format can be larger than screen size.

.NEO – 16-colour low resolution picture in the very popular Neochrome file format.

.PC?/PI? – another very common picture file format popularised by the Degas graphics package. The question mark is a number between 1 and 3, and informs you of the picture resolution: 1 for low resolution, 2 for medium resolution and 3 for high resolution.

.S – the source file produced when using an Assembler programming language.

.SND – a sound data file.

.TXT – generally indicates a text file from a word processor or other text-producing program.

ON THE MENU: A SMORGASBORD OF FUNCTIONS

Just about every operation you've performed so far from the Desktop can also be done via the menu bar at the top of the screen. But that's just the beginning: the menu bar gives you access to countless useful functions. Some options are self-explanatory, and this brief guide reveals the secrets of the others.

Moving the mouse pointer over a menu heading causes a menu to drop down. In each menu, options in black and white are active; you can access these by clicking once on them. Options in light grey are inactive; these can't be accessed until certain conditions are met. Finally, some menu options have ticks by them. This means they are active and have some influence on what happens on the Desktop.

DESK

The Desk menu contains any desk accessories you have loaded (see *DESKTOP*, page 135). A list of available desk accessories appears after the "Desktop Info" option.

Desktop Info

So you want to know the who, what and when of your GEM Desktop? Clicking on this option displays a few copyright notices and dates. Click on the OK button to return you to the Desktop.

Unfortunately there is no simple way of telling which version of TOS your machine sports, although a good guess can be made by looking at the dates that appear. If you really want to be sure, order a copy of *ST FORMAT* 14 (see page 148): Cover Disk 14 features a little program called *TOS Teller* which does just that.

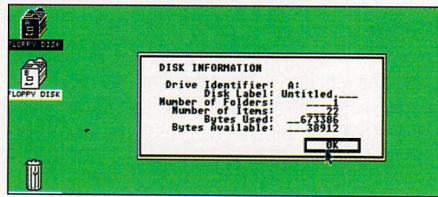
FILE

Open

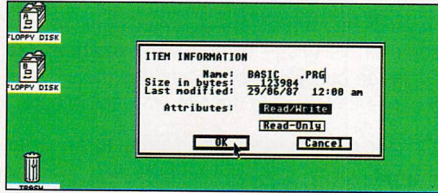
Rather than double-clicking on an icon, you can highlight it by single-clicking on it and then hit the "Open" option. This opens the highlighted disk or folder, runs the highlighted application, or shows or prints the contents of the highlighted data file. Stick to double-clicking – the Open option is a waste of time.

Show Info

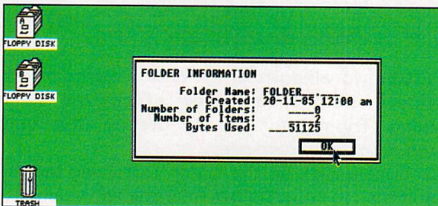
Highlight an icon – disk, file or folder – then select Show Info to view information about it.



■ The "Show Info" dialogue box for a disk icon. Click on OK to return to the Desktop



■ The "Show Info" dialogue box for a file. "Read-only" status means you can't write over or alter the data in the file – good protection if it's an important program



■ "Show Info" for a folder. If you've got TOS 1.4 or above, you can also change a folder's name here – see the box below

New Folder

To create a new folder, first open a directory window and select this option. A dialogue box appears, asking you for the new name. Type in a name of no more than eight alphanumeric characters plus an optional three character extension. (See "What's in a Name?" on page 26 for all the rules.) Then click on OK or press [Return] and the folder appears in the directory.

Close/Close Window

Like the "Open" option, these two duplicate what you can do by clicking anyway. Both close the currently active window, though "Close Window" goes a step further and removes a window completely even if you're inside a folder.

Format

Disks aren't exactly like blank tapes: different computers do different things with them to store information on them, so they must be formatted for the ST before it can use them. Disks can be formatted as either single- or double-sided. Old STs with single-sided drives can format only single-sided disks while all new STs, equipped with double-sided drives, can format either single or double-sided. (If you're not sure which you've got, see the box on page 52.) A single-sided disk can store around 360K of data, while a double-sided disk can store roughly twice that.

To format a disk, insert a disk into the drive, select or highlight the disk icon corresponding to the drive in which the disk sits and select the "Format" option. This option isn't available unless a drive is highlighted. A dialogue box reminding you that formatting erases all data on the disk pops up. Click on OK to continue.

You get the option of giving your disk a name, but you never really need this so you needn't bother. Highlight either single or double-sided and hit "Format." When formatting is complete, you're informed of the number of bytes available on disk. After this, just click on "Exit."

Warning: You can format not only blank, brand new, never-before-used disks, but also used disks, and formatting erases any data previously saved on that disk. Make very sure you don't mind losing that data!

VIEW

Sort by Name/Date/Size/Type

Of these four options, only one can be active at a time. "Sort by Name" displays items alphabetically, with folders before files. "Sort by Date" lists files chronologically, with the most recently created or revised item appearing first. "Sort by Size" shows items from the largest down. "Sort by Type" lists files alphabetically by their file-name extenders.

OPTIONS

Install Disk Drive

GEM normally displays two disk icons on the Desktop. Each icon has a disk identifier (A or B) and the label FLOPPY DISK. You can change the labels and add or remove disk icons from here.

RENAMING A FILE

First highlight the file you want to rename. Then go to the "File" menu and click on "Show Info." Check that the read/write button is highlighted and press [Backspace] or [Esc] to delete the existing filename. Type in a new name (observing the rules stated in the "What's in a Name?" box on page 26), then click on OK or press Return. The new filename appears in the disk directory.



■ If you try to give a file a name that is already present on the disk or try to modify a file with a read-only status, you are greeted by the message here

RENAMING A FOLDER: COMPLETE GUIDE

With all new STs/STEs (TOS 1.4 and above) renaming a folder is easy: simply highlight the folder and select the "Show Info" option in the File menu. From there you can change the name just like a filename. If you have an ST with an older version of TOS, you basically have to copy all the old folder's contents to a new one. Let's say you want to change the name OLDFOld to NEWFOld:

- 1 Check the size of the OLDFOld folder by highlighting it and doing a "Show Info."
- 2 Check how much room remains on the disk by highlighting the appropriate disk icon and doing another Show Info.
- 3 If there's enough room on the disk to fit the entire contents of the folder, continue with this procedure.
- 4 Ensure you're not inside the OLDFOld folder

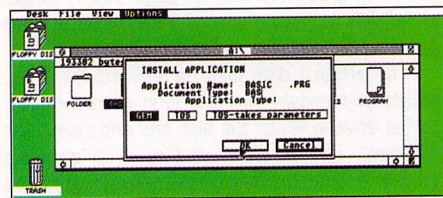
which you want to rename and click on "New Folder" in the File menu. Enter the new name NEWFOld.

- 5 Open up NEWFOld so you get a window of its contents (there should be nothing inside).
- 6 Double-click on the floppy drive icon a second time to open up another window so you can see what's inside OLDFOld.
- 7 Ensure that the two windows don't overlap and that you can see the entire contents of OLDFOld.
- 8 Select all the items in OLDFOld and drag them across to the NEWFOld window. You get an alert box asking you to confirm that you wish to copy files. Click on OK.
- 9 Once copying has finished, get a directory window which shows both OLDFOld and NEWFOld. Select and drag OLDFOld into the trash can. Job done!

Install Application

Double-click on a data file and you usually get a screenful of gibberish. "Install Application" enables you to set the application to load automatically whenever you open the data file, so you can double-click on a document produced with your word processor, for instance, and have the ST automatically run the WP program then load the document ready for you to edit.

First highlight the application you wish to install. This must be a file with the extension .APP, .PRG, .TOS, or .TTP. Then click on "Install Application."

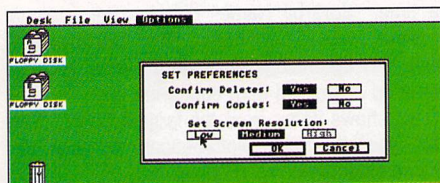


The name of the application you selected appears in the "Application Name" line. In the line below, type the kind of file that application normally produces – DOC or TXT, for instance, for your WP program. Then highlight an application type: "GEM" if the application ends in .APP or .PRG, "TOS" if it ends in .TOS and "TOS-Takes-Parameters" if it ends in .TTP.

Set Preferences

From here you can choose whether or not to display certain alert boxes and determine the screen resolution.

Your ST has three resolutions, or detail levels of screen display, measured in pixels (little squares on screen): low (320x200), medium



■ When you set preferences, it is best to leave "Confirm Deletes" and "Confirm Copies" with the "Yes" button highlighted. This way you're warned when you're about to copy or delete a file or folder – a useful double-check just in case you accidentally select the wrong command

(640x200), high (640x400). Low and medium resolution can be viewed on a TV or Atari's colour monitor. High resolution can be viewed only on Atari's SM124 monochrome monitor, and if you haven't got the appropriate monitor attached the mode buttons appear in light text, signifying that they can't be selected.

Save Desktop

Any modifications you make to the Desktop can be saved to disk so that every time you switch on or reset the machine you return to the Desktop as you left it. All the following are saved: window size and position, icon positions, the way files are displayed and sorted, installed applications, screen resolution. Select this option and the information is saved to disk in a file called DESKTOP.INF.

Print Screen

Has exactly the same effect as pressing the key combination [Alternate] [Help]: the contents of

the screen are dumped to printer, exactly as you see them. No printer, no dump.

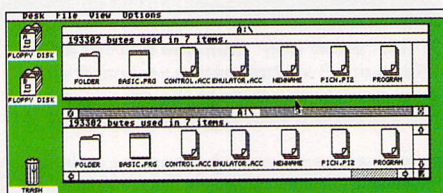
Blitter

Only STs with a special graphics processing chip (the "blitter") for speeding up text and graphics have this option (see *DESKTOP*, page 135). Keep the blitter on unless you encounter problems with certain applications.

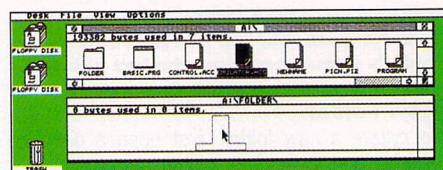
FILE AND DISK COPYING

Because the ST is so versatile, there are many ways of copying files and disks. Here are just some of the best – once you get to know your ST inside out, you may decide you prefer using a different method to the ones mentioned here.

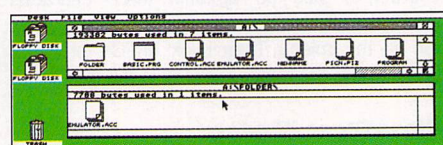
Copying a file from one folder to another



1. Get two windows of the disk contents on the screen. Both should show exactly the same thing. Try not to get any overlap (this only results in confusion later).
2. Double-click on the folder containing the file you wish to copy. Do this in one window only.



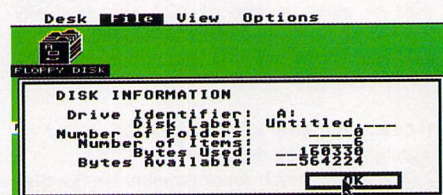
3. Highlight the file you wish to copy and drag it to the folder you wish to copy it to.



4. Click on OK when the alert box appears asking confirmation that you wish to copy the file. After copying you can enter the folder to check that the operation has indeed taken place.

Disk copying

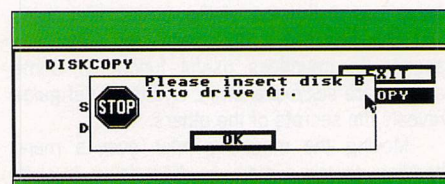
1. You should always back up important disks. First write-protect the disk (move the little tab so you can see through the hole), then check its format – single or double-sided – by highlighting the disk and clicking on "Disk Info" in the File menu. Add "Bytes Used" to "Bytes Available;" double-sided disks total 720,000 Bytes, single-sided half that.



2. Then insert the destination disk (the one you wish to copy to), highlight the drive A icon and select "Format" again from the File menu. Ensure the disk you are copying to doesn't contain anything important. Select single- or double-sided format, the same as the source disk (the

one you are copying from).

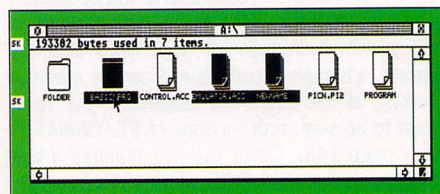
3. Remove the formatted disk from the drive, insert the disk you wish to copy from and drag the drive A icon on to the drive B icon.



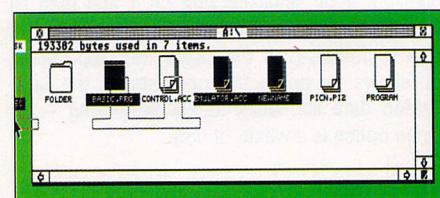
4. You are asked to insert disk B into drive A and disk A into drive A several times. Swap the disks when requested, but take care not to confuse the source disk (disk A) with the destination disk (disk B). Play safe and keep the source disk write-protected.

Copying multiple files to another disk

1. Insert the disk you wish to copy files from and open a window so you can see its contents.
2. Highlight the files you wish to copy. You can select more than one at a time: hold the shift key down and single-click on the first file icon; release the mouse button but keep the shift key down; with the shift key still down, click on another file and both files are selected. Keep holding down the shift key while making further selections.



3. After making your final selection, keep holding down the left mouse button. Drag all the files to the floppy drive B icon. Let go the left mouse button when that icon is highlighted.



4. You are now asked to insert disk B into drive A. This means replace the disk currently in the drive with the one you wish to copy files to. Of course, if you've got two drives, simply insert the disk you wish to copy files to in drive B. Press OK to continue.



5. The more files you wish to copy, the more times you have to swap disks. Keep going, but take care not to confuse disk A (the disk containing the files you wish to copy) with disk B (the disk you wish to copy the files to).

■ Got problems? Each month we answer your technical queries in our *DESKTOP* section. Write to *DESKTOP, ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW. *stf*

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Are you wasting your valuable time setting your ST's clock?

Frontier's Forget-Me-Clock II is the answer

If you're one of those people who has an auto-run program annoyingly prompting you for the time and date every time you turn on your ST or ST^E or even worse, if you're one of those ST or ST^E users who doesn't set the system clock then Frontier's Forget-Me-Clock II cartridge is the solution you've been hoping for.

Just Plug It In And Go

With the Forget-Me-Clock II plugged into your ST or ST^E's cartridge port the system clock (used by the Control Panel) and keyboard clock will automatically be set at turn on or reset by a small auto-run program supplied with the Forget-Me-Clock II. No longer will you have to waste your time setting your ST's clock. Using the Forget-Me-Clock II also means that files saved on disk are always properly time and date stamped making finding the latest version of a file the simple task of just looking for the file with the latest time and date.

Full Pass Through

Frontier's Forget-Me-Clock II is a clock cartridge unlike any other. All other clock cartridges for the ST will tie up the cartridge port making it impossible to have your ST's system clock set automatically while still using another cartridge. The Forget-Me-Clock II has a full cartridge pass through which means that any other cartridge for the ST can be plugged into it while it is plugged into your ST. The Forget-Me-Clock II remains totally invisible so



Frontier's Forget-Me-Clock II Cartridge With Pass Through

that the other cartridge can be used normally, but it still automatically sets the system and keyboard clocks in your ST.

No Need To Open Your ST

Installing some clock cards for the ST means that you have to open your ST's case and pry computer chips out of their sockets. The Forget-Me-Clock II is a cartridge which plugs into the cartridge port on the side of your ST which means that its installation couldn't be simpler - you just plug it in and turn on your ST.

Software Included

Every Forget-Me-Clock II cartridge is supplied with time and date setting software for the Forget-Me-Clock II's clock together with a small auto-run

program which automatically sets your ST's system and keyboard clocks every time you turn on or reset your ST. Built into the setting software is the facility to stop the Forget-Me-Clock II's clock to save on battery life when the Forget-Me-Clock II is not being used.

Satisfaction Guaranteed

The Forget-Me-Clock II is supplied under Frontier's ten day money back guarantee, which means that if you don't like the Forget-Me-Clock II for any reason, you can return it for a full refund within ten days of purchase. The Forget-Me-Clock II has been designed to work with any model of ST whether it be ST, STM, STF, STFM, ST^E or Mega ST.

Two Year Guarantee

The Forget-Me-Clock II carries a full two year guarantee which includes the battery. Battery life has been tested to be many times the guarantee period. Frontier will supply replacement batteries outside of the guarantee period for a small charge.

Price

Forget-Me-Clock II Cartridge £24.99

Price includes VAT. Please add £1.15 for postage and packing to all orders under £50.00. Frontier accepts payment by Visa or Access. Price subject to change without notice. Goods subject to availability.



Frontier Software

time to get sssserious



Playing games is all very well, my lad, but when you're ready for something more – well, stick with your ST! Simon Williams looks at some of the best “serious” software on the ST

So you've got a sparkling new ST! Good choice. But if it's your first computer, or even if you've upgraded from a lesser computer, you may not be aware of the non-games software which is available for your

machine. As well as being an ace games player, the ST is very capable at many other leisure activities and a fast and effective vehicle for business software.

If you're thinking of splashing out on soft-

ware to stretch your ST's serious side, you ought to know what to look for. Here are the basics of the most common non-game applications, and some names to play with – software good enough for a *FORMAT* recommendation...

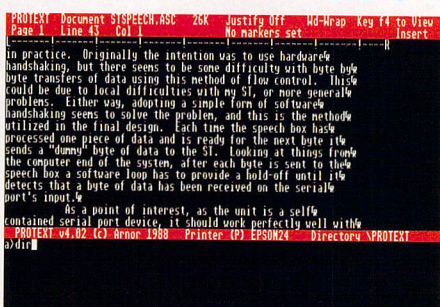
WORD PROCESSOR WORD PROCESSOR WORD PROCESSOR WORD

In its simplest form, a word processor is a means of entering text into your ST so you can save it to disk and print it out. Most programs offer a lot more than text editing, though. You should expect even a basic word processor to be able to do at least three things: reformat text when you insert or delete words; mark out, cut, move, copy or delete any section of a document; and search through your text for a given word or phrase.

Reformatting your text varies between WPs, from a simple keystroke to automatically rejigging all text as you type in characters. There are two main methods of controlling a word processor: key sequences and pull-down menus. While working with menus is easier to learn, keystrokes are quicker to use once memorised. With GEM-based programs, you can also use the mouse for menu selection and highlighting blocks of text.

If you intend to use your ST WP for a business or hobby, you'll probably find “mail merge” useful. Mail merge enables you to produce personalised letters for everyone on your address list, simply by “merging” a standard letter and the list of names and addresses.

Recommended viewing: One of the most common word processors on the ST is



■ **Protex is fast, clear and well functioned – though it doesn't use GEM to the full**

GST's *1st Word Plus* (£79.95 from GST Systems ☎ 0480 496666). This is a GEM-based word processor with all the basics plus the ability to import pictures, spell checker and mail merge. Since it runs under GEM, though, it tends to be rather sluggish.

If you're after a full-function word processor, though only partly GEM compatible, you should try *Protex*. The latest incarnation, version 5, offers spell checker, mail merge, comprehensive printer control and the fastest text handling on the ST. It is ideally meant for manipulating large documents and is capable of handling up to 32 files at once. An enhanced form of the earlier version, now called version 4.3, is

also available for about £50 less, incorporating some of the new features of version 5. You can also access and use your GEM accessories from version 5 – all you don't get is GEM's slider bars and pull-down menus.

PD choice: The original version of *1st Word* is available in the Public Domain, but your best bet is *ST Writer Elite*, which is better featured and quicker. It's easy to use and is only partly GEM-based. It lacks some of the refinements of commercial WPs, such as pull-down menus and windows to handle several documents at once, but some versions come complete with a RAM disk and rudimentary spell checker.

Softville PD library: disk WP12

Goodman's PD library: disk GD17

FORMAT RATINGS

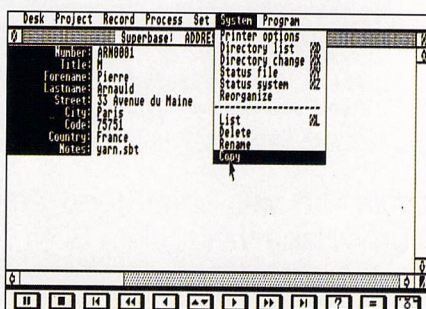
PROTEXT 5/£149.95 Arnor
0733 68909

Features	90%
Speed	81%
Ease of Use	67%
Results	86%
FORMAT VALUE	88%

SE DATABASE DATABASE DATABASE DATABASE DATABASE

A database can be thought of as a computerised card index. There are direct electronic equivalents for all the elements: the box of cards becomes a file, the cards themselves become the records, and the items of information on each card become the fields. In most databases, you can design the layout of each record, giving each field a name and making the ST do the hard work of sorting and searching through the records.

Any database should provide a range of basic facilities: you should be able to add and



■ **Superbase Personal 2 is an excellent database with easy, video-style controls and graphic handling**

delete records at any time, edit their contents, and rely on the program to maintain good indexes to make searches quicker. It should also enable you to design your own reports, so you can print out selected items from specified records, and to export the data into a word processor for further “massaging.”

Some ST databases can hold graphics in

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ST FORMAT

"The mechanics of the scanner can hardly be faulted. Quite clearly, not all hand scanners are equal and this unit is one of the best."
ST WORLD

NOW AVAILABLE! New A4 DAATAscan Pro with sheet feed, as well as the highly rated DAATAscan Pro Hand-held unit. Both with lightning fast software.

their records as well as text and numbers. If you intend to use graphics in your records, though, remember they take up a lot of memory and disk space.

Recommended viewing: The leading lights in ST databases are *Superbase 2* and *Data Manager Professional* (£39.95, Electric Distribution ☎ 0954 80381), though there are others, including *K-Data* from Kuma (£49.95 ☎ 0734 844335) and *Prodata* from Arnor (£79.95 ☎ 0733 68909).

Superbase Personal 2 is an all-singing, all-dancing GEM-based program which can handle graphic, number and character fields and uses

an intuitive video recorder style control panel to enable you to flip through its records. What's more, if you need to upgrade your data handling at a later stage, you can upgrade to the fully compatible – and fully programmable – *Superbase Professional*.

PD choice: *DB Master* is a good, GEM-based database which consists of two programs: one to design the record layout and the other to handle records as you build up your files. You can include colour and font effects to brighten up your data, and search facilities are good. However, documentation is sketchy and there are no facilities for calculations.

Softville PD library: disk ACC26
Goodman's PD library: disk GD165

FORMAT RATINGS

SUPERBASE PERSONAL 2/£39.95
Precision Software/081 330 7166

Features	93%
Speed	78%
Ease of Use	78%
Results	94%
FORMAT VALUE	91%

SPREADSHEET SPREADSHEET SPREADSHEET SPREADSHEET

Not the most popular of ST applications, judging by their availability, spreadsheets are nonetheless essential for anyone forecasting finances. A spreadsheet is like a sheet of squared paper, where every square can take a number, a label or a formula. The nifty thing about the spreadsheet, though, is that a formula can tie together the numbers in different cells and produce a result in another cell automatically. Change any of the source numbers and the contents of the results cell changes, too. This is ideal for "what if" calculations, an essential part of good forecasting and something Michael Fish dreams of.

If you're looking for a spreadsheet, keep your eyes open for three things. First, the size of the sheet should be at least 256 by 256 cells. Although you won't be able to fill this many cells without running out of memory, a large matrix gives you plenty of room to lay your calculations out clearly.

Second, the pre-defined functions provided by the program govern what calculations you can do. Generally, the more functions the better, but if your work includes statistics, check the statistics functions. If your main interest is in finance, check the financial ones. Obvious, really: define your needs first.

■ **ST Sheet** is well up to the standard of some commercial spreadsheets on the ST. It's a bargain at just £13

Third, it's nice to be able to display your calculations graphically. Most spreadsheets offer bar graphs and pie charts, but compare what they can do and check for printer support.

Recommended viewing: Of the commercial spreadsheets, the *K-Spread* series from Kuma are good. *Logistix* (£114.94, Grafox ☎ 0494 728439) is another possibility, since it's been around in a variety of guises and is thoroughly tested.

K-Spread 4 is an thoroughly comprehensive

beast, though not desperately fast. It benefits from GEM compatibility, which makes it easy a little on the slow side but is easy to use.

PD choice: A couple of worthwhile programs: *Opus 200* is a neat package but needs GDOS and at least 1MByte to run.

ST Sheet is perhaps a better bet for the new user. It runs under GEM, provides an excellent set of functions and works quickly. It's shareware – which means that you're asked to send the American author \$25 for registration. (See box on page 34.)

Softville PD library: disk ACC31
Goodman's PD library: disk GD371

FORMAT RATINGS

K-SPREAD 4/£129.95
Kuma/0734 844335

Features	65%
Speed	66%
Ease of Use	73%
Results	74%
FORMAT VALUE	70%

CS GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS

WHAT IS THIS CURIOUS THING CALLED GEM?

If you're a newcomer to the wonderful world of the ST, you may be confused by all the references in this article and elsewhere to GEM. In fact the Graphic Environment Manager (GEM) is simply a grand name for the point-and-click system you see when you start up your ST. If you've ever glared at a window, clicked on a menu or even just moved your mouse, you've used GEM!

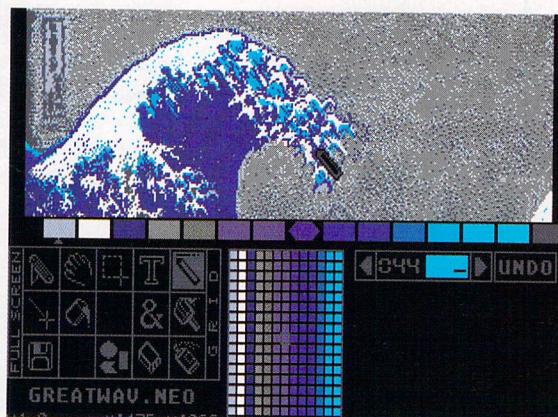
The problem is, it's a bit slow for some programs, and is therefore sometimes bypassed. This may enhance speed, but at the cost of reduced user-friendliness.

If you get stuck with other ST terms used here or elsewhere in this issue, then turn to page 65 for a special two-page newcomer's *Jargon-Buster* section.

One of the main interest areas for ST users who aren't absorbed by games is graphics. Drawing and painting programs provide outlets for all kinds of creative talent – witness *FORMAT's* *Kandy Koloured GALLERY* pages. If there's no graphics package bundled with your machine, there are plenty out there to please.

Range of colours is one aspect to bear in mind, and 256 colours is a basic minimum these days. To get this colour palette, you have to settle for low resolution, but the standard range of drawing tools is now often complemented by variable brush shapes, colour cycling, block movement and basic animations. Manipulations like rotate, flip, re-size, skew and shear are also common.

One important thing to check out with a graphics pack is the disk formats it supports. If you want to import pics from other sources or



■ **Neochrome**, one of the veteran art packages on the ST, has been recently updated by a "programming" crew

save your artwork for others to view, you need to bear in mind the fact that the three main painting standards are GEM's IMG, *Neochrome's* NEO and *Degas's* PI1, PI2 and PI3 formats. Most packages can pick up on at least one of these formats.

Recommended viewing: *Degas Elite* (£24.95 Electronic Arts ☎ 0753 494442) is a fine drawing package with some useful functions, but *Deluxe Paint ST* wears the laurels – see review in *FORMAT* 15. This package really is feature-packed, and quick with it. Bezier curves, plenty of brush effects and basic animation are all included and the *DPaint ST* won the first ever *FORMAT* Gold for non-game software.

PD choice: There are two contenders for the PD graphics crown: *Neochrome* and *Ani-ST*. While the latter is a new addition to the Public

Domain, it has for a long while been a commercial painting and animation package, and *Neochrome* has been around even longer.

Neochrome was bundled with early STs but has been continuously developed and is still the first choice of many ST artists. It's easier to use than *Ani-ST*, while still having some innovative features like real-time zoom.

Softville PD library: disk ART1

Goodman's PD library: disk GD11

■ *Neochrome* is part of the *ST FORMAT* Graphics Collection – see page 164

FORMAT RATINGS

DELUXEPAINT ST/£49.99

Electronic Arts/0753 49442

Features	98%
Speed	96%
Ease of Use	80%
Results	97%
FORMAT VALUE	96%

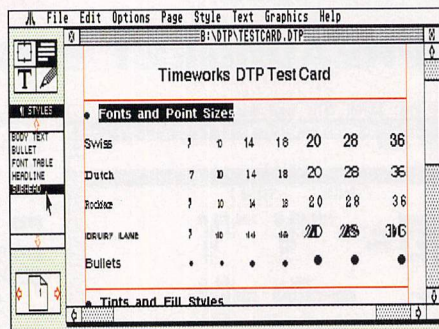
DESKTOP PUBLISHER

An application area which sprung up at almost the same time as the ST itself. If you want to take your word processed text and lay out the columns of a newsletter, adverts for your PD library or the pages of a fanzine, there's a good choice of DTP packages for your ST.

Decide what kind of document you're aiming your DTP at. If it's the novella for your latest megagame, you'd be best off with a program like *Timeworks DTP*, where you can set up style sheets and use them to establish a regular page layout. This helps in long documents where you don't want to waste hours laying out each page.

If you're more interested in meticulous page control, with text wrap around graphics, rotation of text and graphics or colour work, you'd be better off with a program like *PageStream* (£171.35, Silica Systems ☎ 081 309 1111), which embodies a far less structured approach.

Look also for good control of typography – fonts, sizes, letter and line spacings – and proper printer drivers for the printer you have (you do have a printer, don't you?).



■ *Timeworks DTP* is particularly good at handling long, formalised documents, such as books and manuals

Recommended viewing: *Timeworks* and *PageStream* are joined by *Fleet Street Publisher* (£199.95, Mirrorsoft ☎ 071 928 1454) and *Calamus* (£459.99, Signa ☎ 0252 341600) to complete a quartet of excellent DTP applications. All of these can handle basic page layout. For the new user, though, *Timeworks DTP* has stood the test of time and is

inexpensive enough to make it ideal for anyone contemplating setting up a fanzine or newsletter.

PD choice: Choice is restricted in the Public Domain, possibly because of the complexity of DTP programs. *Eazy Text* is the only real contender, though it's not so much PD as a budget offering, at around £20. It can handle straightforward page layout, but don't expect anything too fancy.

Softville PD library: request by name

Goodman's PD library: request by name

FORMAT RATINGS

TIMESWORKS DTP/£99

GST/0480 496666

Features	70%
Speed	77%
Ease of Use	83%
Results	80%
FORMAT VALUE	88%

ACCOUNTS

This is not the most glamorous of application areas, but one which can smack your wrists when you shell out on another *FORMAT* Gold. What you want in the accounts field is a program which does the hard work for you and reminds you what's necessary. It should warn you if your cash is about to disappear down the pan, and show you why, preferably with graphics (not necessarily of the pan).

Recommended viewing: A major contender is *Personal Finance Manager Plus*, which provides multiple accounts, automatic handling of standing orders, plenty of graphs and all this from the GEM Desktop. Up to five windows can be opened on the same account and there's full on-line help for when you get lost. Why not try the demo version on last issue's *FORMAT* Cover Disk before you buy?

■ *Personal Finance Manager Plus* is a home accounts program with plenty of extras, including good graphing

PD choice: Although fairly thin on the ground, accounts programs do exist in the Public Domain. For home accounts, you could look at the appropriately-named *Home Accounts*.

Business account programs are also available: try *Double Sentry* and *Invoice Pro* version 2.

Softville PD library: disks BUP2, MISC22, MISC18, respectively

Goodman's PD library: disks GPRO1, GD464, GD296, respectively *stf*

FORMAT RATINGS

PERSONAL FINANCE MANAGER PLUS

£39.95/Michtron/0726 68020

Features	83%
Speed	75%
Ease of Use	84%
Results	89%
FORMAT VALUE	86%

HOW TO GET PROFESSIONAL QUALITY PROGRAMS CHEAP

You don't have to spend a Publisher's ransom to obtain good "serious" software. The ST has attracted some excellent Public Domain and shareware programs, which cost little but supply plenty of punch. "Public Domain" refers to programs which for one reason or another have been released by their authors for use by anyone, free of charge. The only cost you pay is a very small copying fee to the PD library, usually about £3.

"Shareware" is a term used to describe

programs which have been released for assessment purposes via normal PD sources. Shareware authors want a return on their work, though, and you are morally bound to pay a registration fee for such software, if you use it regularly. The registration fee often covers extras like an updated version or a printed manual. Both PD and shareware programs are often well up to the standard of the "buy before you try" brigade.

The PD choice under each category in this

article is designed for the new user. There may be more effective or sophisticated options available, but we've gone here for a low intimidation factor. *stf*

■ Softville PD library, Unit 5, Stratfield Park, Waterlooville, Hants PO7 7XN

■ Goodman PD library, 16 Conrad Close, Meir Hay Estate, Longton, Stoke on Trent, Staffs ST3 1SW

■ For *FORMAT*'s complete directory of PD libraries, see PD pages beginning page 127.

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Compo Software is one of the leading software houses for the Atari ST in Germany where the number one selling word processor is Compo's That's Write.

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classic games

Andy Hutchinson picks the ten games no ST owner should be without

1 XENON 2 Mirrorsoft

If you're into shoot-'em-ups, then this is the game for you. The Bitmap Brothers are the stars behind this, the king of zapping games. They've produced a game which has everything: amazing music, ear sizzling sound effects, fabulous gameplay and graphics which you could frame. Power-ups along the way help you build up a death-dealing ship which puts the Death Star to shame.

STF Rating - 90%

2 MIDWINTER Microprose

All the elements that go towards creating a classic are there in *MidWinter*. Part-strategy, flight sim, shoot-'em-up and downright mindbending puzzler, this game is all things to everyone. You've survived a nuclear winter on the last habitable island on the planet. An itinerant ex-soldier decides he wants to rule the roost and sets out to conquer the island. It's up to you to stop him!

STF Rating - 96%



■ *MidWinter*, from Microprose, has all those features that keep you coming back

3 SIM CITY Infogrames

This is the game to play when you're feeling particularly megalomaniacal. Create your city and then see that it functions correctly: you are the mayor and the police, controlling railways, power plants, roads and housing. Play this game for two minutes and you find that you're hooked for life. Excellent graphics, a massive plot and addiction they should bottle.

STF Rating - 92%

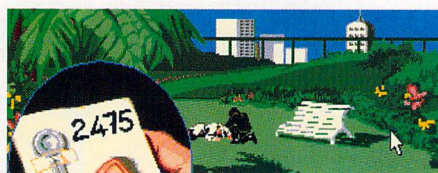


■ Infogrames' *Sim City* is acclaimed as a supreme achievement in ST gaming history - and it's fun to play, too

4 OPERATION STEALTH Delphine/US Gold

Here's a game that dragged the tired adventure format into the 90s. You are super-spy John Glames and it's your job to retrieve a stolen Stealth Bomber. Using a very intuitive mouse control method, *Operation Stealth* is the ideal game for the adventure novice.

STF Rating - 93%



■ The fabulous *Operation Stealth* proves that the adventure genre is far from dead

5 KICK OFF 2 Anco

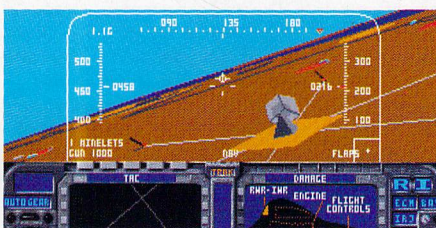
Taking the football simulator to dizzy and stomach-trembling heights, Anco produced the best ST footie game yet. What makes this game head and goalposts above the rest of the field is its hugely absorbing gameplay. Warning: don't play this game against someone really good: you'll want to stuff the joystick up his nostril.

STF Rating - 92%

6 F19 STEALTH FIGHTER Microprose

Microprose always had a reputation for producing simulators with mindboggling depth, and in this one - suitable for the novice ST user and the pro alike - you can fly your hi-tech fighter into real combat situations. It's kitted out with the most advanced weaponry in the world, so revolt and become the least advanced pilot.

STF Rating - 96%

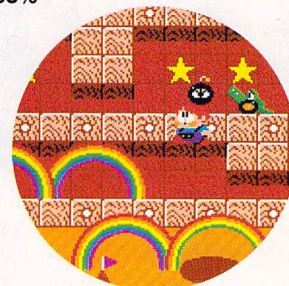


■ Microprose's *F-19 Stealth Fighter* has all the classic qualities you could ask for

7 RAINBOW ISLANDS Ocean

The platform game is a genre which anyone can enjoy. *Rainbow Islands* is all about reflexes. By firing your rainbows you've got to make your way up the screen, shooting the creepy crawlies and collecting the bonuses as you go. If you know a cure for *Rainbow Islanditis*, give us a call.

STF Rating - 93%



■ *Rainbow Islands* has got to be one of the greatest cutesy platform games ever

8 POPULOUS Electronic Arts

Good and evil battle it out on an isometric 3D landscape. You can induce floods, earthquakes, and volcanoes and generally make life rotten for a lot of little computer people. If you enjoy playing God then give *Populous* a bash. You won't regret it - but the populace will.

STF Rating - 92%

9 DUNGEON MASTER FTL/Mirrorsoft

This is the biggest-selling ST adventure of all time. You control a band of four adventurers, out to destroy an evil wizard who's bricked himself into a dungeon. Learn to cast spells and work out all the wicked puzzles set in the dungeon. Be prepared for long nights and square-shaped eyes if *Dungeon Master* gets you in its grip.

STF Rating - 93%

10 DAMOCLES Novagen

Creating a solar system isn't an easy job, but Paul Woakes managed it. You're a mercenary, hired to save the planet Eris from the comet Damocles. With one hour to spare, you need to whizz around the planets, picking up useful items and assembling a nova bomb. An extremely absorbing game which is perfect for the novice gamer. **stf**

STF Rating - 94%

THE NEXT 20: 11. *ARMADA* - Arc/Atari - 91% 12. *AUSTERLITZ* - Mirrorsoft - 92% 13. *BATTLE OF BRITAIN* - US Gold - 91% 14. *BLOOD MONEY* - Psygnosis - 90% 15. *BLOODWYCH* - Mirrorsoft - 95% 16. *CAPTIVE* - Mindscape - 93% 17. *CASTLE MASTER* - Incentive - 90% 18. *CONQUEROR* - Rainbow Arts - 91% 19. *DRAGONS BREATH* - Palace - 92% 20. *FLOOD* - Electronic Arts - 91% 21. *GETTYSBURG* - Arc/Atari - 93% 22. *GRAVITY* - Imageworks/Mirrorsoft - 93% 23. *HOUND OF SHADOW* - Electronic Arts - 90% 24. *INTERPHASE* - Mirrorsoft - 93% 25. *IRON LORD* - UBI Soft - 90% 26. *INDIANA JONES AND THE LAST CRUSADE* - US Gold - 90% 27. *LEGEND OF FAERGHAIL* - Rainbow Arts - 90% 28. *MAGIC FLY* - Electronic Arts - 91% 29. *ONSLAUGHT* - Hewson - 90% 30. *PLAYER MANAGER* - Anco - 93%

a game is born

There's an awful lot more to any decent ST game than meets the eye. Where do the ideas come from? Who does what? Do programmers earn millions? The answers to these questions and many more are revealed in this exclusive report on the making of the follow-up to the classic Resolution 101. Steve Carey asks the questions



■ Paul Carruthers: the man behind two **FORMAT** Golds



Paul Carruthers is a game programmer. So far his CV includes two *ST FORMAT* Gold-rated games – the excellent *Archipelagos* for Logotron and the thrilling *Resolution 101* for Logotron's new games arm Millennium. These two games have marked Paul out as a man to be watched, and with signs of a new game on the cards there is good reason to be excited. His latest project, due for release in April, is *Stormball*, a one or two-player sports game which is unusual in that it uses much of the code, the "graphics engine," that was first written to create the 3D graphics in *Resolution*, itself a development from *Archipelagos*.

Paul has been struggling with *Stormball* since *Resolution* was released last July. He is now approaching the crucial stage when a good idea must be converted into a good game. Over the next few months we shall be observing his progress in some detail. We'll also be talking to his

employers in an attempt to discover just what it's like bringing a game from the initial conception through a traumatic birth and beyond.

We shall of course chart the development of the game itself, as ideas arise and evolve or are rejected. But we shall equally be concerned to convey something of the experience of writing a game – the elation and the disappointment, the sheer effort and even the boredom.

We will be looking in detail at the marketing of a game – the packaging, the advertising, the sales story. And when it's all over, we shall be asking everyone concerned how it all went. Runaway success or unmitigated disaster?

This month we interview Paul about his game and go on a conducted tour of the program as it stands to date.

STF: Your latest project, Paul, *Stormball* – how did it come about?

It just sort of grew up over a long time while I was writing *Resolution 101*, and I suppose I wanted to do something in which the essence of the game was really simple, but which would be a nice game. Something that was easy to write and would not take too much time but which played well.

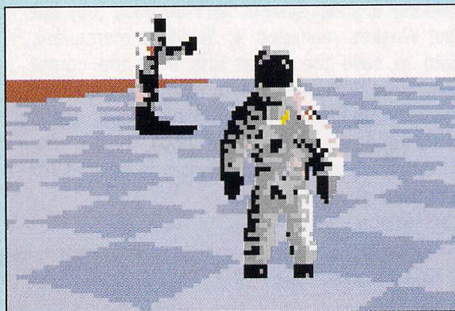
I was trying to get away from the idea of having to write a really big game which had everything in it; to concentrate on getting at the heart of the game, to build code around it. You see, when I was doing *Resolution* I wrote all the code and then tried to squeeze a game into it – which is the wrong way round, really.

Afterwards you have the opportunity to add on all the extras like the sound and the graphics

"I haven't seen any games that really have any imagination – any sort of genius"

THE STORMBALL DIARY

WEEK 1: IN THE BEGINNING...



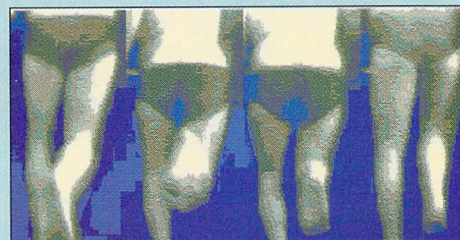
■ "This is the earliest screen I have, dating from about July. It's the 3D polygon on the floor taken out of *Resolution*, together with an old astronaut sprite I used in *Quadralien* acting as the player in the game. At this time I was really just trying out code,

finding out what sort of speed it would run at, with a floor like that and two sprites, one of which is compressed in real time.

"I'll explain that. You see, the only picture I have is of that full size sprite, the one in the foreground. The other sprite in the background is only half that height, but rather than having a sprite of half the size, or indeed of every size in between, I only need to use the one sprite. Whenever I want to draw that smaller one, I simply use a routine which compresses it. That's slow anyway because it has to be done pixel by pixel, but since it's happening in real time it has to be quick. So that again is a routine I wrote for *Resolution*. I've altered it slightly in this game, but it's basically that routine.

"So all that has happened here in this earliest incarnation of *Stormball* is that I have allied those two routines out of *Resolution* to find out what sort of speed this runs at, how it looks and so on. Now I've got the basic ideas running I can get on with the game"

WEEK 2: GETTING UP 'N' RUNNING



■ "This is unfortunately me in my pants. I'd had enough of that astronaut sprite, and I wanted to have a running sequence that I could try in the game. The only way I could do that – I can't draw awfully well – was to use my camera hooked up to digitise me. I had to do it in two halves, because this room is too small and I didn't have enough of an angle on the camera to get all of me in at once. So I did it in two halves and this is one of the halves. Hideous isn't it, just look at those horrible – yes, anyway..."

which make it a really good game, but you can only do that if the game is right.

STF: What games would you most wish to have written? What do you admire the most?

I wish you hadn't asked me this, because I'm not really into games at all! There's lots of games which are excellent – they play well or the code is amazing – but I haven't seen anything that really has any element of imagination, you know, any sort of genius. I can't think of anyone who has got a reputation for writing that kind of game.

STF: How do you feel about the project at the moment?

I like it. It's not what I want to do in my heart, but as a sports game, it plays really, really nicely.

STF: What do you mean it's not what you want to do in your heart? What is?

I just want to write something which is *me*, you know, in which I can put lots of little touches of imagination. I don't think *Stormball* is it but I shouldn't really say that, should I? Ian will kill me! It is genuinely a nice game. I wrote *Archipelagos* and I had the feeling about that that I have now – it is an easy game to write because it works right. All the elements fall into place and work. I had to really force it through with *Resolution*. This one is writing itself.

STF: Have there been moments when you wished that you hadn't started?

Not really, no. I could easily imagine it as a game a long time before I actually wrote it. I had the vision as well with this one and it's all a matter of moving yourself from having a vision to actually having all the code. So there aren't really any points where you suddenly stop and think, God, what shall I do now?

There have been times where I wasn't happy with it, where you start to think, "this isn't a game – there's no excitement." And then you stop for a



■ Paul, programmer of *Archipelagos* and *Resolution 101*, is now hard at work on *Stormball*

week or two and come back and find it was OK. Even though it looked bad, it was just that you had been looking at it for such a long time.

STF: How do you sort out a good from a really rotten idea for a game?

I honestly don't know. You just have to have it in your mind for a hell of a long time. A good idea sort of hangs round in your head and the bad ones just drop away. There isn't any reason, that's just what happens.

STF: And where do you get your ideas?

Out of a book that I'm not going to show you!

STF: No, I mean, you have them when you're in bed, or out walking, or in the bath – or worse?

Not worse, no! Usually when I'm actually writing something. I tend to think, oh this is a nice routine, wouldn't it be nice if I could use it in a game which did blah-de-blah – and you know, that usually

happens. That's what happened with *Resolution*.

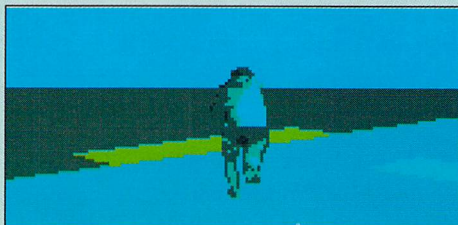
STF: What about payment, advances and so on? How is that sorted out?

Well, in our case Astral [the three man team Paul is part of] have worked with one publisher for a long time and built up a lot of trust with them. They know that over a period of about a year we can write a good game.

At the start we go along and say, we have a couple of ideas for games on these lines and they'll say, "Well, we like this idea here but this other one we're not too happy about. Write this one and we'll offer you X amount as an advance on your royalties." We'll say, "Oh no, we'd like a bit more please." And then we probably end up in the middle somewhere, usually a lot closer to their original sum than ours!

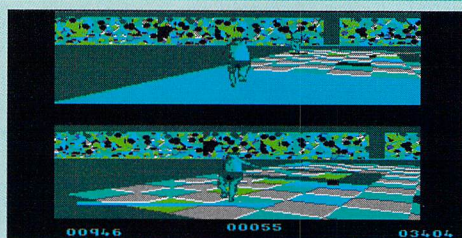
That amount is paid to us over the time we write the game, and then after it comes out and is on the market it earns royalties. Once it's earned as much as the advances that we were originally paid, then we also get straight royalties after that. On the whole though, the advances just about

WEEK 5: THE FIRST BITS OF GAME!

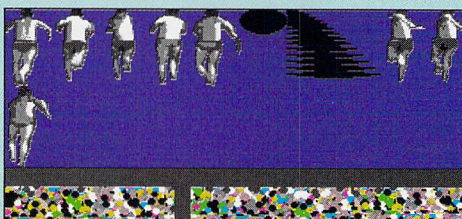


■ "Now I have a pitch on the floor rather than just one huge area. And I'm using a sprite which is actually me running, so I have a series of about eight sprites of me running around which you use.

"At this point your man can actually move on the pitch, so I would be controlling him with a joystick to make him turn around and run forwards and backwards. But of course there's no ball, there's no halves on the pitch. It's basically what was happening in the earlier picture but with a new sprite"



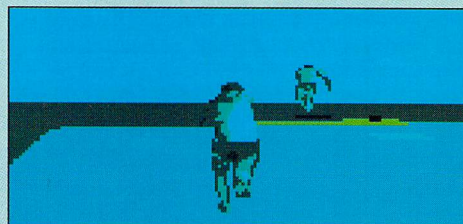
■ "This is how it'll look in two player mode: two smaller windows on screen, each with the viewpoint of one player. These actually show the same situation as the previous screen, but from different points of view"



■ "This is the only screen of sprites I have in the game as it is now, a month or so after

starting. It's obviously very simple, just a collection of templates I use to put something up on the screen. In the finished game there won't be any of this at all. It will all be replaced by material produced for the game by a graphic artist. Me in my underpants will be hidden away forever more"

WEEK 9: AND NOW THERE'S TWO...



■ "This is from late August – possibly early September. Now there are two of you moving round on the pitch. The other bloke in the background is controlled by the computer, so he can move around after the ball"

➤ cover everything the game makes in its lifetime.

STF: Doesn't that make you a bit suspicious? Yes, it does.

STF: Either the publishers lose a small amount of money on a lot of games, or it goes the other way and they end up not paying a lot of royalties that they ought to?

Yeah. I think that may be so. We have done some really nice games, but we still haven't really hit the market right. If you do that, I think you can easily earn twice as much.

STF: So why didn't *Resolution 101* make you millionaires?

Because people didn't buy it.

STF: Why didn't people buy it?

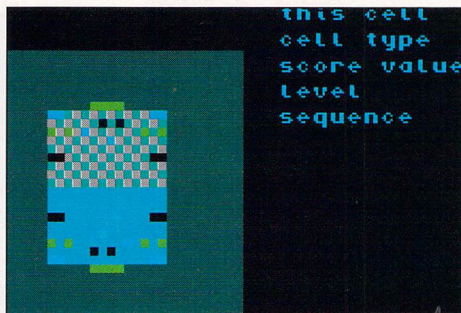
I don't know. Without trying to lay blame, it came out at the start of a very hot period and at a very well known slack time of the year for the market. I believe that every game that came out at that time didn't do terribly well. Obviously I could blame the quality of the game – some people might say that it just wasn't good enough.

STF: It got very good reviews, though.

It got good reviews on the whole, but it did get criticism for some aspects.

STF: Like the music, for example. Did you agree with that criticism?

On the whole, yeah. The gameplay is actually quite interesting, but it takes a long time to get into it. I could play the game because I knew how it



■ "This is what I use to invent new pitches. It's in the game now so that anyone who's working on *Stormball* can alter any of the games, but it won't be included in the final game. This is purely for my own work"

operated, but I think those new to it wouldn't really have known what they had to do and just ended up flying round shooting things.

"Perhaps there's something wrong with game players when they spend a whole day mindlessly playing computer games"

STF: So *Stormball* is going to be something that people can pick up and play?

It's going to be totally different, yes, because it will be instantly obvious what's in the game. At the same time you can play it over

weeks and I've made sure that you'll find other bits that keep you occupied. You have to actually play the game to improve rather than just be lucky.

STF: I always think it must be very difficult to write a game for someone who has never seen an ST game before, someone who got their ST at Christmas, for example, and at the same time satisfy the

"A good idea hangs round in your head and the bad ones just drop away"

sort of hardened cynics who will be reviewing it and everyone in between with different areas of expertise.

Absolutely. And I think there are a lot of writers who carry on and ignore that aspect of game design. We always try to make it an easy start. It's not quite like that on *Resolution*, because it's hard anyway. You can't make a game like that easy.

STF: Do you use kids for playtesting your stuff, or do you just depend on Millennium to playtest for you?

Up to now, yeah, but I want to take charge of that. Those people who test or comment on it can play the game anyway, because I've been sending them copies of it every month for the last year. They've been following the game right from the start. A person who just comes along and starts it up won't know what the hell is happening.

But then, on the other hand, you get someone who writes into *ST FORMAT* saying, this game is too easy, I spent £25 and I solved it in a day – there must be something wrong in the game. Perhaps there's something wrong with themselves if they can spend a whole day just lounging and mindlessly playing computer games. God, what a terrible thing to say! **stf**

■ Next month in "A Game is Born," we look at the commissioning and game specification process, as well as dipping into the diary Paul has kept of *Stormball*'s progress and witnessing some more of his blush-making indiscretions.

Incidentally, if you would like to offer yourself as a game-tester for *Stormball*, write to: *Stormball* testers, *ST FORMAT*, 30

Monmouth St, Bath BA1 2BW. Who knows, if you're very lucky you may even find yourself featuring a little later on in this series!

WEEK 21 – JUST TURNED 21 – AND STORMBALL IS ALREADY IN ACTION

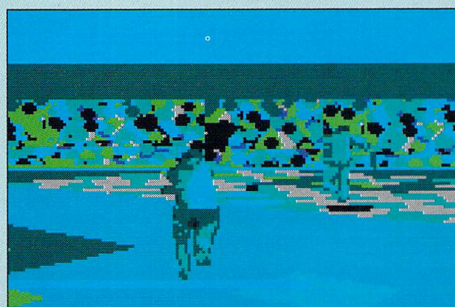


■ "This is right up to date, and all the elements of the game are in. We've now got two halves in the game, with each player in his own half. There's a sort of audience in the background. That's not how it will be, it's just a strip of colour which I can replace when it's been drawn by a real artist. I have the ball and am about to hit it. The small bar at the bottom of the screen shows how much time I have to hit the ball, so any moment now I will hit it.

"The other bar is the time the ball is allowed in each half, so I have obviously got quite a lot of time there to hit it out of my half and into the other bloke's half.

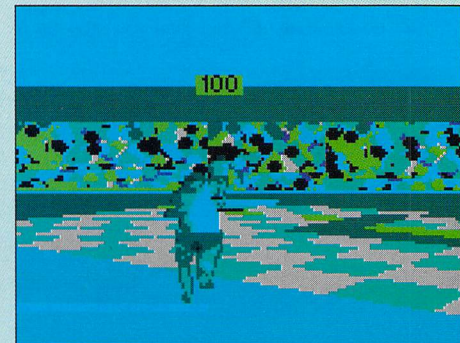
"I'll have to explain what I intend to do here. I'm aiming the ball into the opposite

corner, because even though you can't see it terribly well, there are three high score squares and if I hit it over there there's a high possibility that I'll hit one of those three. The other bloke is actually on my right which means I can hit it and he won't have enough time to move in"



■ "Now I've hit the ball, which is why the bar at the bottom is gone. The other bar is still there and you can see that it's much larger because it's only this moment entered the other person's half.

"I've just moved slightly sideways and the ball, which has entered the other half, is illuminating some of the squares as it moves. Those are the white squares"



■ "Now I've moved up to the half-way line so I can see more clearly what's happening over in the other half of the field. I've hit one of those high score squares, because you can see that the hundred has actually risen out of it and is moving up the screen. You can't see it terribly well because I'm hiding it, but the other bloke has now moved to the ball and has caught it. He's actually stopped it.

"What I'm intending to do is to move that sprite in the foreground a little bit to one side, so he's not hiding anything that's in the middle. Eventually, in the final version he'll be holding some kind of hockey stick-type of implement" **stf**

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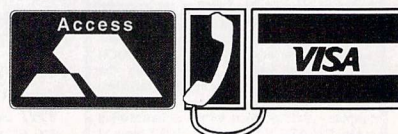
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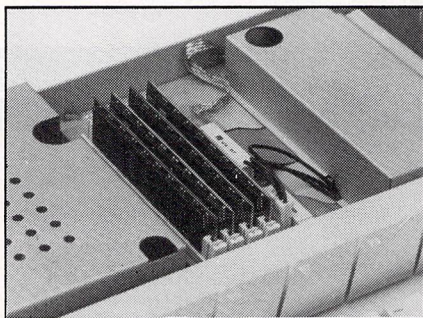


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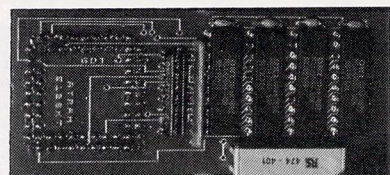
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ATARI ST ACCESSORIES

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Spectre GCR Macintosh Emulator pack. Includes MAC ROMS .. £369.00

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"FORMAT GOLD"
- Refer to the Jan. 1991 issue of 'ST FORMAT'

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Star LC24-200 Colour : as above, colour version £ 289.00
Star FR-10 9pin 300/76cps 16 NLQ fonts £ 369.00
Star FR-15 as FR-10, wide carriage £ 429.00
Star XB24-10 24pin; 4 SLQ, 25 LQ fonts £ 429.00
Star XB24-15 as XB24-10, wide carriage £ 569.00
Star LC15 wide carriage vers. of LC10 £ 299.00
Star LC24-15 wide carriage vers. of LC24-10 £ 369.00
Star Laserprinter 8, 8ppm/300dpi £ 1329.00

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NEC P2-192/64cps multifont 24pin printer £ 239.00
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ST SOFTWARE

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Cyber Studio (CAD 2.0)	£37.50
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Knife ST	£24.95
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ATARI ST BOOKS

GFA BASIC advanced programming guide	£11.95
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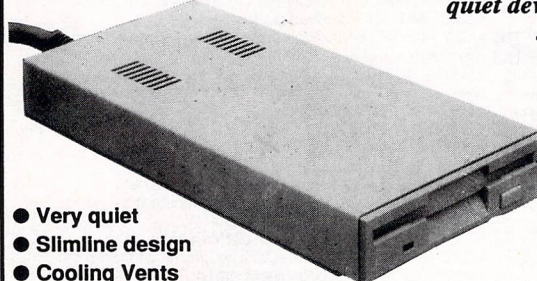
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APPLICATION

- **MP7 - Home Business Pack:** DSD, Datahandler and First Base 2 databases, Personal Database a 10 address book, STSheet and Sheet 2 excellent spreadsheets that include graphics and Lotus 123 compatibility, STWriter Elite the word processor and Double Sentry the accounts package. All fully working and full featured. A 3 disk pack for £750!
- **A48 - UNITERM V2.08 full.** THE Comms package for the ST.
- **BPRO1 - CSR.** The ELECTRONIC BANK STATEMENT fully featured personal accounts.
- **A96 - DSD. SHEET V2.0.** powerful all features spreadsheet.
- **A108 - DSD. IMB. B/STAT**a sophisticated graphing and statistical analysis program.
- **A121 - POOLS - Expert Results Predictor v2.5.**
- **W2 - STWRITER ELITE V3.6** the word processor.
- **W5 - MICRO-EMACS v3.925** text editor.
- **A125 - DSD. IMB. OPUS V2.10** very powerful spreadsheet and charting program. Requires GDOS which is on disk A163.
- **A138 - DOUBLE SENTRY V0.5** the accounting program.
- **A166 - PERSONAL DATABASE** an excellent address database system. The PD version only allows 10 records but the Shareware version is unlimited, details on the disks. **VANTERM V3.71** excellent all features communications program does every thing except split baud rate. **RELATIVE TREE** the genealogy program.

FONT

- **A45 - STAR NL10/LC10 FONT DESIGNER v1.1** with 21 fonts.
- **A110 - CALAMUS** Fonts disk. 9 PD fonts for use with the DTP package Calamus: Facade, Fura, Greeny2, Hebrewy, Manvily, Math, Peignoy, Silicy and Steely.
- **A135 - GEM FONT MASTER** by J.Millar the GEM font Editor.
- **A137 - Over 40 GEM GDOS** fonts.
- **A175 - Over 70 GEM GDOS** fonts.

EDUCATION

- **A47 - CSR. KIDSGRAPH, KIDSGRID2, KIDSMUSIC, KIDSPIANO, KIDSNOTES** - graphics and music/sound programs for children.
- **A100 - CSR. KIDPOTATOE, KIDABC, KIDSKETCH, KIDSTORY.**
- **A101 - CSR. KIDSONG, NUMERICAL GO ROUND** - excellent animated maths program, NUMBER MAZE.
- **A177 - CSR. KIDSHAPES PLUS** a graphic program for the older child. **KIDPUZZLE** features 12 pictures.
- **A178 - CSR. NOTSTE. CAN YOU SPELL.** Talking spelling trainer.

UTILITY

- **MP1 - STARTER PACK** for the new STer. **STWriter Elite** the word processor, **Datahandler** and **Firstbase** the databases and **NEOchrome** the drawing package. Also utilities: **RAM disks, spooler, picture converters, desktop accessories, monochrome screen emulator, colour screen emulator, Auto loader GEM, extended disks formatters and loads more.** 3 disk pack for £750!
- **A10 - KERMIT** kit.
- **A31 - 3 dozen 1ST WORD** printer drivers.
- **A11 - MONOCHROME** monitor emulator v5. **NOTSTE.** CMFONTS converts Macintosh fonts to ST GDOS format. **DEFORMATTOR** - this program deformats your disks!
- **A88 - DCFORMAT v3.03** THE ST disk formatter. **DISKMOD** - writes MSDOS boot sector. **MEG A MINUTE** Elite v2.1 HD backup.
- **A90 - SUPERBOOT v6.0** THE ST Boot program.
- **A91 - FILE SELECTOR v6.0** replacement file selector. **VIRUS KILLER v2.01** excellent virus detector and killer.
- **A97 - MMR. STICKER III.** The disk label program.
- **STW 41 - FSELECT v3/1989** replacement file selector. **ICONE ACC** allows you to design icons and assign them to a file.
- **A109 - QUICK DISK, QUICKFIND v1.5, QUICKINDEX v1.5, QUICKST v1.2, QUICKVIEW v1.3, QUICKINF v1.3, QUICK LABEL V1.1, QUICKPRINT.**
- **A111 - HEADSTART v1.1** excellent program that allows you to auto-boot ANY type of program from your AUTO folder.
- **A119 - FLYING STARD** v1.04 1200/75 comms Prestel.
- **A128 - RECOVER** is a program that copies any number of specified sectors on a disk to a named file on another disk.
- **A134 - BOOT DRIVE SELECT** select a drive to boot from when you reset your ST. **GOACC** select Desktop Accessories.
- **A156 - DSD. MMR. PLANETARIUM.** THE star planets package.
- **A157 - CUSTOM FORMATTOR** multi featured disk formatter. **BOOT SECTOR STORAGE** system allows you to store boot sectors from many disks as a file on 1 disk.
- **A158 - CSR.** Complete Amateur Astronomy Guide.
- **A159 - Address Book.** Database. First Base. Datahandler.
- **A163 - GEMINI V1.1** desktop replacement.
- **A167 - BIG COLOUR EMULATOR** for Monochrome monitors.

- **A168 - ARCGSH V2.1** a shell for any program is already setup for ARC, ZOO, SHAR, UUD and UUE excellent. **BYTEFREE v3.3** displays how many bytes are free on all drives. **DISKINIT** activates a 2nd drive without reset. **DISK MECHANIC v1.0** disk analyser, copier, formatter, sector editor etc all in one very powerful.
- **A171 - RECOVERABLE TRASHCAN** retrieve deleted files.
- **A173 - ARCHIVER DISK.** ARC v6.02 archiver, ARC shell V198, LHARC V1.13, TURBOARC, ARCT archive entire disks.
- **A174 - DCOPIY v3.12** excellent disk utility features include: copy, move, erase, lock, hide, display, ARC and unARC. **BIGSCREEN** allows you to use GEM windows larger than the actual screen. **FILESPLY V1.2** file browser with search.
- **A176 - STARTERM V1.11** the brilliant comms package, features: VT52, VT100, ViewData, XMODEM.
- **A186 - DDCDISP** the best document displayer on the ST features load picture and a non case sensitive search facility! **FCOPY 3** the excellent disk copier, formatter and virus checker.

GAMES

All require a colour screen.

- **MP2 - Games Pack 1:** DSD. Monopoly, Fruit Machine, Cribbage, Poker, Solitaire, Tunnel Vision, Reflex, Checkers, Devils Tomb, Death Star, Battle Ships, Zephyr and others. A 3 disk pack for £750!
- **MP3 - Games Pack 2:** DSD. Star Trek, Tennis, Patience, Fire Storm, Laser Chess, Mile Stone, Azarian, Barn Yard, Space Invaders, Space War, Lunar Lander, Bridge It!, Race Cars, Monkeys and Balloons, Spectral Sorcery and Give Us A Break. A 3 disk pack for £750!
- **G23 - IMB. BOLO!** Absolutely brilliant game with excellent graphics in the Arknoid mould only better.
- **G86 - DSD. Tennis!**
- **G95 - CHANCE** a good shoot 'em up with lots of action.
- **G96 - MUTANT** excellent platform game.
- **G97 - DSD.** The Star Trek game by Eric Tronics A full graphics game with sampled sounds!
- **G107 - PATIENCE** by Eric Chapman an excellent card playing game includes Golf, Little Spider, Calculation, Siege, Raglans.
- **B5 - PRO DARTS 501** down.
- **B7 - BALL ZONE** an incredible Arkanoid type game, only better.
- **B12 - ACE INVADERS** the DEFINITIVE Space Invader!
- **B13 - ZENITH** a space combat for two players.
- **B11 - MAELSTROM** excellent space shoot-out.
- **B14 - GOLDRUSH** a multi-level platform pursuit.
- **B17 - MAKE A BREAK** trivia quiz.
- **B18 - PARABELLUM** excellent platform game.
- **B22 - BANDIT** slot machine with nudges up and down etc.
- **B27 - PSICOTIC** a space shoot 'em up.
- **B23 - SPACE BLOB** an immensely enjoyable platform game.
- **B30 - A QUEST FOR GALAXIA** an excellent Galaxians clone!
- **B37 - MR DIG** dig tunnels to collect the cherries.
- **B35 - HOSTILE RECEPTION** a Xenon-type shoot-em up.
- **B39 - Onyx** an excellent shoot 'em up with many varied and excellent sprites! All in 68000 machine code.
- **B40 - Dizzy Lizzy** across between Pacman & Boulderdash.
- **B41 - Exodus** awesome shoot 'em up with fantastic graphics!
- **B44 - Exterminate** if it moves KILL IT! A shoot'em up.

GRAPHICS

- **MP4 - Graphics Pack 1:** DSD. CSR. ANI ST the excellent animation package, fully working allows you to create your own animations!, **Pearle** the ray tracing package with full examples, **Mini Paint** the excellent fully featured painting package, **NEOchrome** the excellent painting program, and picture converters. A 3 disk pack for £750!
- **MP5 - Graphics Pack 2:** DSD. CSR. Master Painter the excellent fully featured paint package that includes multipy screens, **Colour Burst II** the 800/3200 shades on screen at once paint package, **Fine Line** the drawing program, **Fractal Zoom** the most comprehensive fractal generator on the ST, the **Atari Image Processor**, **MegaBlit** the paint package, **Studio** and **VanGogo 2** excellent paint packages. A 3 disk pack for £750!
- **GR6 - Degas Support Disk:** 155 fills, 10 brushes, 7 fonts & 24 printer drivers.
- **GR11 - Disk** full of picture utilities: **TINY STUFF v3.4** and **TINY VIEW v4.21**, **PICSWITCH v0.7** and more.
- **GR14 - MMR. PUBLIC PAINTER v0.1** Degas & .IMG compatible.
- **GR17 - Picture** converters. To & from Print Master, Degas, NEO, Tiny, IFF, SPEC512, IMG, AIM, Postscript, Spectrum512 & GIF.
- **GR20 - IMG** utilities. Convert Degas, Tiny, NEO, MACPaint, Spectrum to a mono IMG file. Also an IMG viewer & slideshow.
- **BPRO3 - CSR. SPRITE MASTER** a professional sprite editing package tailored to suit most programming languages.

- **BPRO5 - CSR. DSD. Sprite Portfolio** 600+ top quality sprites.

LANGUAGE

- **L1 - 68000 ASSEMBLER, XLISP STLOGO, TINY BASIC.**
- **L3 - ADVSYS** Adventure writer language.
- **L7 - XLISP v1.7** includes manuals.
- **L8 - FORTH** from Bradley Firmware.
- **L9 - ST ICON v6.3.** based on SNOBOL4.
- **L10 - LITTLE SMALLTALK.**
- **L13 & L14 - MODULA-2 DEVELOPMENT SYSTEM v1.0.**
- **L15 - DSD. SOZOBON C** Compiler.
- **L17 - DSD. AGT V1.19.** Excellent adventure writer.
- **BPRO2 - DSD. Budgie UK 68000** Programmers Library V42.

MUSIC

- **M9 - MUSIC WRITER** create music on screen.
- **M15 - THE ACCOMPANIST V2.3** a 16 Voice MIDI Sequencer. A fully working MIDI sequencer by Henry Cosh.
- **M18 - SOUNDTRACKER** player and SoundTracker modules.
- **M19 - SOUNDTRACKER** player and SoundTracker modules.
- **M20 - SOUNDTRACKER** player and SoundTracker modules. Also documentation and some source code in 68000 and GFA basic on SoundTracker formats and different frequencies.
- **M21 - NoizTracker** fully working with Modules.

DEMOS

All require a colour screen and a double sided disk drive.

- **D221 & D222 - NOTSTE.** IMB. DRAGONS LAIR DEMO by IRS.
- **D197 - NOTSTE.** Space Ace.
- **D202 - NOTSTE.** Predator demo by The Islander.
- **D125 - NOTSTE.** The CareBears Cuddly demos.
- **D128 - NOTSTE.** The Wattaheck demo.
- **D129 - NOTSTE.** The Swedish demo includes SYNC & TCB.
- **D122 - NOTSTE.** The Union demo!
- **D77 - Exceptions** 4 BIG demo.
- **D91 - AMIGA DEMO!**
- **D108 - IMB.** Calamus product demo.
- **D123 - The** Snowman demo. IMB.
- **D138 - IMB.** Startrek Animation with digitised speech.
- **BD1 - Mind Bomb.**
- **D176 - The** Care Bears 'So What Demo'.
- **D189 - Swedish** New Year Demo 1/2.
- **D207 - The** SNOWMAN demo the 1/2 MB RAM version.
- **D210 - IMB.** The Star Wars Walker I demo. Excellent Animation and sampled sounds.
- **D211 - IMB.** The BatMan demo by RAM KILLER.
- **D213 - IMB.** The Star Wars Walker II demo. Excellent Animation and sampled sounds.
- **D217 - The** DELERIOUS DEMO II by The Overlanders.

STE DEMOS.

All require a colour screen and an Atari STE.

- **D144 - The** Official Atari France STE demo!
- **D214 - Sound** OFF.
- **D228 - AN** COOL from The Care Bears STE demo.
- **D229 - IMB.** The Jungle demo!
- **D230 - Movie**STE.
- **D231 - IMB.** BOING STE.
- **D232 - IMB.** Fantasia.
- **D233 - IMB.** 3D Scroller.
- **D234 - IMB.** Psychedelik House II By The Overlander. Aciiii!!!

PDOM CLIPIT

- **VOL1 - 3MB** of clip art images: sports, flags, animals, cartoons, humorous, Jewish, borders, all occasions, horses, eyes, etc. etc. All in Degas format compatible with ALL DTP packages. A 5 disk pack only £12.50!
- **VOL2 - 3MB** of clip art images: men, woman, illuminated A to Z, arrows, stars, explosions, humorous, cartoons, pointing hands, food and lots of miscellaneous images. All in IMG format scanned at 200 DPI suitable for all quality DTP packages. A 5 disk pack for only £12.50!
- **VOL3 - 6MB** of clip art images: boys, girls, babies, illuminated A to Z, arrows, art deco, all occasions, humorous, food, vegetables, fruit, meat, glasses and cups, banners, scrolls, calligraphic ornaments, herbs, kitchen utensils and more. All in IMG format scanned at 200 DPI suitable for all quality DTP packages. A 10 disk pack for only £25.00!

Abbreviations Used:

MMR-Mono Monitor.

CSR-Colour Screen.

DSD-Double Sided Disk.

IMB-Requires IMB RAM.

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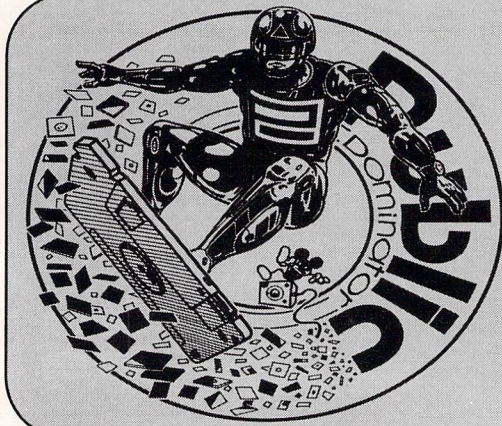
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Side 1

CHAMPION OF THE RAJ

Exclusive! Fully playable demo of the Indian action-strategy game from ImageWorks

PMA – The Proportional Mouse Accelerator. Speed up your mouse response and cut down travel distance: relieve your aching wrist and save that cluttered desk space

READER – Talking text files! Now you can have your ST read your documents out loud!



Side 2

GFA BASIC 2 – Full version with manual, plus part one of *FORMAT's* special tutorial

GUARDIAN – The hidden virus detector. Protect your disk collection against infection

DBASE ONE – Full database program, with a complete index of all *ST FORMAT* issues

ACCESSORIES – Five handy desk accessories: RAM disk, RAM checker, Desktop butler, *Snapshot* screen grabber and calendar

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More files than a metalwork shop! *ST FORMAT* brings you more programs than any other disk mag. To do this, we use file-crunching techniques and disk formats so advanced that they oversee the Russian space program in their spare time. A massive 1,249K (approx) of games, demos and utilities gets neatly folded, twisted, levered and jemmied into every single *ST FORMAT* Cover Disk.

ON THE SIDELINES

Sadly, the earliest 520STs were fitted with single-sided disk drives, meaning they couldn't read double-sided disks – until now. The *ST FORMAT* Cover Disk has been specially prepared to enable all ST owners to read at least Side 1. Now is that nice of us or what?

ALL YOU NEED IS HERE!

Thanks to the non-standard, never-knew-there-was-so-much-in-it disk format by *ST FORMAT's* favourite mad inventor, Rob Northen, everyone can load and use *Champion of the Raj*, *PMA* and the *McAipof Reader*. Double-sided drive owners are luckier than a very lucky thing, for they can also access *GFA Basic 2*, *DBase One*, *Guardian*, and the accessories, immediately. Others have to see page 52 first.

DOING THE DOUBLE

To read Side 2 with a double-sided drive just double-click the left mouse button on the folder named *SIDE_2*. It should open up like a normal folder, listing all the files contained within. If it doesn't, just see the next section below.

IS YOURS A BIT ONE-SIDED?

If you have a single-sided drive and you try opening the *SIDE_2* folder, you see an alert message telling you that the data on the disk may be damaged. This is just the ST's way of telling you it can't read Side 2. Don't fret, just click on *CANCEL* and you'll be OK. Then see page 52.

TAKE YOUR VIRUS MEDICINE

Before you bung it in, back it up! Accidents can and do happen and you could lose the lot, so make a copy of the disk and write-protect the original before you put it in your drive to be absolutely safe. Afterwards, write-protect your copy too, 'cos that's the safest way to stop it picking up those nasty, horrible viruses from infected disks.

If you don't do this, don't come crying to us after the worst happens. We'll just say we told you so.



CHAMPION OF THE RAJ

BY: MIRRORSOFT/IMAGEWORKS

SIDE: 1

MACHINE: ALL COLOUR STs

FOLDER: RAJ

FILES: ACODE.ACD, BOX.FNT, GAMEDATA.DAT, S2.DAT, SPRITES1.CMP, RAJ.PRG

Champion of the Raj from ImageWorks is an exciting action/strategy game, based in India in the 1800s. Six princes are battling to unite the country against a murderous sect known as the Thugs. Each prince

has his own strengths and weaknesses and you choose your own difficulty level. You could be the favoured Viceroy of the East India Company (who won in real life) or you could test your diplomatic and military skills by becoming the prince of the Gurkha territory.

In this short but fully playable demonstration, you get a chance to see some of the stunning full-colour visuals and play one of the exciting sub-games which is only part of the finished article. In this game, you must take part in a tiger hunt, searching out the big cats in the jungle. Keep an eye out for the beaters (the Indian chaps who're chasing the tigers out of the undergrowth): shoot them and you're in

trouble. And don't let the tigers get too close, 'cos they ain't nice to meet face to face!

STARTING OUT

Simply double-click on the folder *RAJ* to open it. Then double-click again on the file marked *RAJ.PRG* and the game loads automatically. After the introductory screens at the beginning, you are taken to the tiger hunt. Use the mouse pointer to aim your weapon, and hit the Spacebar whenever you want to fire a shot. Remember that your gun is only a double-barrelled shotgun, circa 1810, so be prepared for the time it takes for the thing to reload every second shot. Make every shot count or you'll be catfood!



■ The wonderful thing about Tiggers, is Tiggers are wonderful things. Didn't stop the old colonials taking pot-shots at 'em though, did it?



■ Stop taking the pith! Put your old topee on, practise your "airhailair" greetings and take over Northern India in *Champion of the Raj*



READER

BY: PUBLIC DOMAIN

SIDE: 1

MACHINE: ALL STs

FOLDER: READER

FILES: AREADFIL.PRG, READER.PRG

This handy little program reads text files back to you, in almost perfect

English (or any language, depending on the language of your text file). All you need to do is tell it the name of the file you want it to read and it goes about reciting those syllables in its merry way. It can handle questions and exclamations by raising and lowering the pitch of its voice, in exactly the same way as a real person would. Who knows? It could be reading the news in a few years!

This program was originally included on last month's Cover Disk, but due to a few, er, unexpected gremlins, that version may have been unusable on some

machines. This version works on all STs, so (we hope!) the panic is over!

STARTING OUT

Double-click on the *READER* folder to open it. Then double-click on *READER.PRG* to load *Reader*.

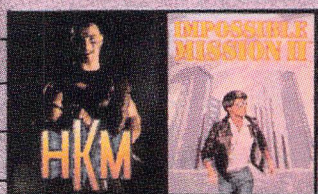
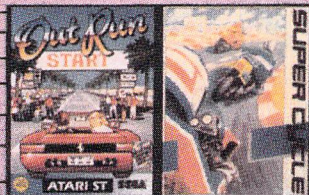
If your ST displays bombs on screen when you do this, turn off, turn back on, then re-open the *READER* folder and double-click on *AREADFIL.PRG* before double-clicking on *READER.PRG*

To operate *Reader* follow the onscreen prompts contained in the File drop-down menu.

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GFA BASIC 2

BY: GFA DATA MEDIA
SIDE: 2
MACHINE: ALL STs
FOLDER: BASICTUT.001
FILES: BOX.BAS, CIRCLE.BAS,
 PLOT.BAS, SETCOLOR.BAS,
 TEXT.BAS, DEMO.BAS,
 GFAMAN.DOC, GFABASIC.PRG

The most popular version of the most popular programming language is yours, free, with *ST FORMAT*. This version of *GFA BASIC* is a complete, no-nonsense BASIC interpreter, far better than the original *ST BASIC*. Included in the same folder are several files which demonstrate *GFA BASIC*'s capabilities and are part of the tutorial on page 59 this issue. These are the files ending in .BAS.

If you already have some

knowledge of BASIC, you may want to dive straight into *GFA BASIC* and start programming. To help you, we've included a full manual listing all of *GFA BASIC*'s commands, in the file *GFAMAN.DOC*. You can obtain a more comprehensive manual by contacting GFA Data Media directly on ☎ 0734 794941.

If BASIC is new to you, why not go straight to page 59 and add a new string to your bow? Programming the ST can be as simple as typing a letter (almost) and you'll find hours of entertainment ahead.

STARTING OUT

Double - click on the file *GFABASIC.PRG* to load and run the interpreter. Once it's loaded into memory, you may begin programming immediately. The most commonly used commands are displayed at the top of the screen. These can be selected either with the mouse pointer or by hitting the relevant function key and should be used to load and run the demonstration files included.

```

Save Load  Save, Merge  Quit  List  New  Block  Blk Sta  Replace  Pg up  Pg down  Insert  Direct  Run  Test
The GFA Demo! Part 1 - (C) ST Format 1991.
Written by James Beswick.

MERGE the other parts of the demo into this routine from each
part of the tutorial. Lines which start with ' are not processed.
'Variables' techniques like X1 and X2 which are used, are similar to
algebra techniques (eg. A=2 and B=4 therefore A+B=C, etc.).

Press any key to exit from the demo.

Cls
Setcolor 0,0
Setcolor 15,1911
Box 114,74,284,124

Repeat
  X=Random(319)
  Y=Random(199)
  C=Random(4)
  Color C,Y
  Plot X,Y
Until Inkey$=""

Clear the Screen.
Set background colour to black.
Set text colour to white.
Put box in place of the logo.

Start loop.
A random number between 0-319 is stored in X.
A random number between 0-199 is stored in Y.
A random number between 0-4 is stored in C.
The dot will be coloured by a colour 0-4.
A dot is then placed at the random X/Y values.
Continue until a key is pressed.
  
```

■ This version of *GFA BASIC 2* has the most commonly used commands at the top of the screen, where they can be selected at the touch of a mouse button or the press of a function key



GUARDIAN

BY: PUBLIC DOMAIN
SIDE: 2
MACHINE: ALL STs
FOLDER: GUARDIAN
FILE: GUARDIAN.PRG

Worried about viruses? No? Well, you should be! Unless you operate a perfect "clean environment" you are bound to be infected at some time. The trouble is, it can take weeks before you realise, and by then your entire disk collection could be damaged. To help out, here's a program which examines every disk you put in the drive and tells you if it thinks it's dodgy.

STARTING OUT

Copy the file *GUARDIAN.PRG* to a blank disk as follows. First, use the

"Create Folder" option in the Desktop's File menu to make a folder called *AUTO* on your blank disk. Now copy *GUARDIAN.PRG* into that folder and reset your ST.

If you use this disk to start your ST each time you switch off or reset, then *Guardian* automatically loads, runs and hides itself in your ST's memory. If you later insert an infected disk, the screen flashes and a bell sounds, warning you that the disk may contain a virus. If so, you have the option to destroy it, but be careful. Don't ever attempt to repair commercial, auto-booting disks (and this includes *all* games) in this way: they'll become unusable.

Whatever virus-killer program you use, read the instructions carefully before you begin - and if you're not quite sure what you're doing, make a point of asking a friend before you do anything. We can't accept any responsibility if you ruin your disk collection.



PROPORTIONAL MOUSE ACCELERATOR

BY: RICHARD KENNEDY
SIDE: 1
MACHINE: ALL STs
FOLDER: ACCS
FILES: PMA.ACC, PMA.DOC,
 PMA.RSC

This smart little accessory applies a multiplier to the mouse movement depending on the speed you set it to. A fast move of the mouse moves the pointer a long way across the screen, thus minimising the amount of work that your poor tired little hands have to do. *PMA* comes with 3 preset speeds and multipliers so you can configure it to suit your needs. Each multiplier is used when the speed is less than or equal to the speed next to it. The table at the right shows how the mouse moves.

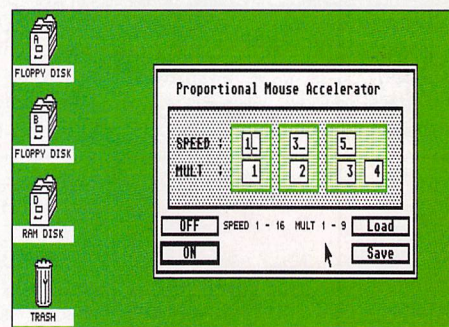
After you've set up *PMA* to give you the best balance of speed and usability, you can save the settings to disk by choosing "Save." A file called *PMA.INF* is then stored on the root directory of your disk, and in future

loads this is automatically read into *PMA*, ready for use.

STARTING OUT

To use *PMA*, you must copy the files *PMA.ACC* and *PMA.RSC* to a blank disk. Make sure that the files are saved to the root directory - that is, not in any folders. To use *PMA*, simply reset your ST with the *PMA* disk in the drive. Because it's an accessory, you can't run *PMA* from the Desktop. Instead, you should select the *PMA* accessory from the Desk menu at the top of the Desktop screen. For further information, read the *PMA.DOC* file which is stored in the same folder on the Cover Disk.

SPEED SETTING	MULTIPLIER SETTING	MOVEMENT (in pixels)
1	1	1
2	2	4
3	2	6
4	4	16
5	4	20
6	5	30
7	5	35



■ The *PMA* control screen enables you to add a massive dose of acceleration to your tired little mouse - can you handle it?

THE DISK NEEDS YOU!

We need *your* software - games, utilities, demos - anything good, original and preferably short. If you've written anything worthy of the *ST FORMAT* Cover Disk (and remember, it's the ones we reject that makes ours the best), send it with this form and full documentation to: Neil Jackson, *ST FORMAT* Cover Disk Editor, 30 Monmouth St, Bath BA1 2BW. Allow four weeks for a reply.

Name _____
 Address _____

Daytime 'phone _____

Program title _____

Size of files in K _____

What's so brilliant about it _____

Don't forget to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Keep a copy of your program, because contributions are non-returnable

Please sign the following declaration: This program is submitted for publication in *ST FORMAT*. It is wholly my own work and I agree to indemnify Future Publishing against any legal action should copyright problems arise.

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ACC72 - DATA Handler, GEM based
ACC74 - FREEBASE, menu driven
ACC75 - WGDATA, complete system
ACC88 - Database Construction, not v1.09
ACC89 - ZAPCard, card index style
ACC92 - SONGFILE, record collections

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WP23 - EDIMAX, the text editor

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ACC31 - STSHEET, fully WKS compatible D/S
ACC76 - OPUS200, the best! - Imeg

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WP28 - PubPart fonts - Hudson, Columbia, Devol, Thames, Spokane, Saturn etc.
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WP63 - CALAMUS fonts - Over 40 on this disk, some complete others upper case only.

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WP26 - 17 Screens of Mac clipart
WP31 - Whimsical animals
WP32 - Office Humour
WP37 - 22 screens of FOODS
WP41 - 15 screens of Christmas designs
WP59 - Garfield, 20 screens
We have over 30 disks full of clip art, see our catalogue for pictures/descriptions.

UTILITIES

ACC24 - MONO EMULATOR (not for art prgs)
ACC57 - TURTLE hard disk backup (Imeg)
ACC63 - UNTURTLE for use with above
ACC64 - Star colour set-up etc.
ACC69 - Mouse pointer editor
ACC70 - STICKER3, disk labeler - high-res
ACC79 - QUICKDISK collection
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ACC98 - Hack'n COPY copy prg.
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GAME6 - Colossal Cave, original
GAME68 - STARTREK (Imeg, not STE)
GAME70 - SPECTRAL SORCERY, good!
GAME83 - Snatch & Crunch - adult!
GAME84 - ELVEN CRYSTALS
GAME85 - TARK, text adventure
GAME103 - TETRISIDE, TILES, VSQ (good)
GAME104 - RISKY, version of RISK (hi-res)

CARD/BOARD GAMES

GAME2 - CHESS, MONOPOLY (USA)
GAME9 - CHECKERS, EBW
GAME18 - LASERCHESS, different!
GAME88 - RACEPLUS, pseudo monopoly
GAME89 - ADDICTION, Patience (not STE)

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GAME62 - NUMBERMAZE, Number-go-rnd
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GAME93 - Computer jargon quiz game
GAME95 - WOLF & 7KIDS, kids adventure
GAME105 - NOAH'S ARC, spelling game

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GAME45 - FLOYD the DROID, shoot'em up
GAME67 - HEADS 'N HAMMERS (not STE)
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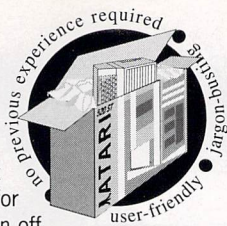
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First, take this copy of *ST FORMAT* firmly in one hand and tear off the small plastic package that's taped to the front. (If there isn't one there, see your newsagent for a replacement immediately.) Turn off your ST at the power switch and while it's off, have a look around for a couple of blank or unused disks that can be used to store all the Cover Disk files. Leaving the ST off while you're doing this kills any viruses that may be lurking inside – you don't want to infect your new Cover Disk.

● Incidentally, if you don't know what a virus is, or you're unsure of any of the techie-phrases in this guide, just turn to the special *Jargon-busters* section starting on page 65 for a complete list of ST terminology.

(THE SAFE WAY TO) WAKE UP YOUR ST

Right, so you have a couple or three blank disks, and the ST has been cooling off nicely. The first job that needs doing is the preparation of the blank disks. You need the ST for this, but you need to be sure it's still virus-free. The best way to do this is to use the Cover Disk as a boot disk. Check that the write-protect notch in the corner of the Cover Disk is open, so that you can see through it. This prevents anything being written to it until you close the notch. Pop the

start your Cover Disk

*Especially for newcomers, **FORMAT** presents a back-to-basics guide to getting the most from your Cover Disk. Neil Jackson explains how*



Cover Disk into the ST's drive slot and turn on the power switch.

After a couple of seconds the ST's Desktop appears in all its lurid

green wonderfulness. Now eject the Cover Disk and put it to one side – you'll need it later. Then format your blank disks by following the pro-

cedure below. When you've done that, you can copy the files from the Cover Disk using the procedure explained overleaf. **stf**

SINGLE? DOUBLE? WHOSE SIDES ARE YOU ON?

With all this talk of single and double-sided disk drives, you may be wondering which type your ST has. Most STs have double-sided drives. All STEs, 1040s and MEGA STs have double-sided drives. It's only the very earliest 520STs which had "singles" fitted. Almost all 520STs sold for the last two years are "doubles." If yours might be a side short of the full load and you haven't had it long enough to be sure, there's a dead easy way to find out. Just follow these simple steps:

1. Turn off the ST for 30 seconds.
2. Insert the Cover Disk.
3. Switch on, and wait for the Desktop to appear.
4. Double-click on the Disk A icon to see the folders

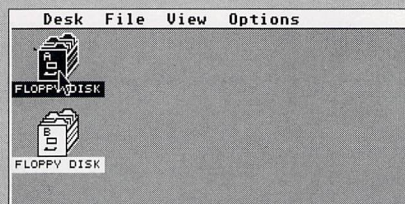
(RAJ, READER, ACCS and SIDE 2).

5. Double-click again, on the folder SIDE 2.

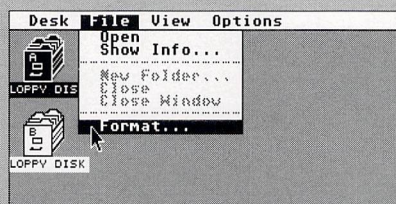
6. If another group of folders is displayed (BASICS, MOREACCS, INDEX and GUARDIAN) then breathe a sigh of relief. You have a double sided drive.

7. If instead you get the message "Data on drive A may be damaged," you aren't so lucky. You can only access the folders on the first side, because you have a single-sided drive. You are able to copy only RAJ, READER and ACCS to a single-sided blank disk. Don't fret, though, you can still get copies of the side 2 programs if you check out the offer on this page. For now, just click on CANCEL and continue with the files you have.

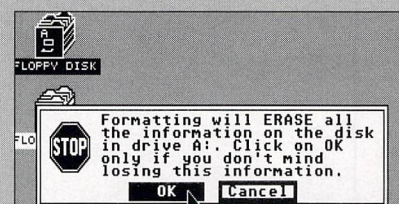
THE **FORMAT** GUIDE TO FORMATTING DISKS – ER, THE **FORMAT** WAY



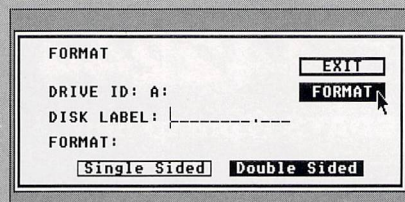
1. Make sure that all the blank disks you want to format are write-enabled (with the little tabs closed) or you won't get much data on them! Put one into the drive and move the mouse pointer over to the Floppy Disk A icon. Click once on the icon with the left mouse button and it turns black



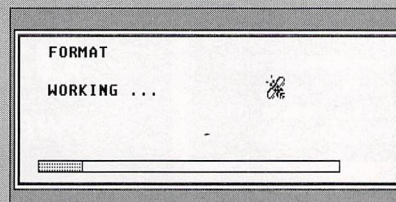
2. Now, using the mouse to move the pointer on the screen, move the arrow up to the menu bar at the top of the Desktop, over the word "File." The drop-down menu drops down, and at the end of the list of options is the word "Format." Move the arrow over the word and it turns black too



3. Click the left mouse button and a dialogue box appears, warning you that all the data will be lost from the disk in the drive if you continue with the formatting operation. Don't worry, because that's exactly what you want to do. Move the pointer onto the OK box and click on it to continue



4. Another dialogue box appears. If you have a double-sided drive, click on "Double-sided" (see the box on this page if you're not sure what kind of drive you've got). If you have a single-sided drive, you don't need to change the setting. Now go up to the box which says "Format" and click on it.

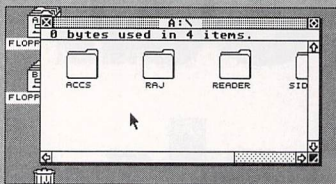


5. When you do this, your ST's drive starts to whirr and the orange light nearest to the drive comes on. While the formatting operation is progressing, the pointer changes to a bee and the screen displays this message. When it's finished, the screen changes to show the "Format Complete" box



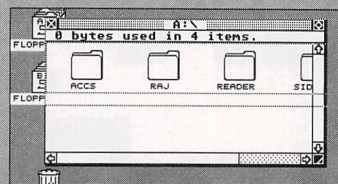
6. The "Format Complete" box tells you how much free space there is on your now-formatted blank disk. A double-sided disk has 726,016 bytes free, while a single-sided one has only 375,376 bytes available. Click on OK and repeat the formatting operation for each of your blank disks

HOW TO BACK UP YOUR *ST FORMAT* COVER DISK - IN THREE EASY STEPS



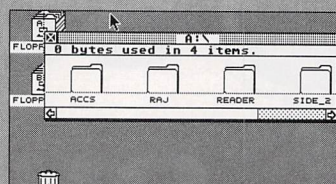
1 OPEN THE WINDOWS

Now you have some ready-prepared blank disks (see previous page), it's time to start copying your *ST FORMAT* Cover Disk files to their new home. Pop your Cover Disk into the ST's drive and press the reset button at the back of the machine. After a couple of seconds, the Desktop appears again. Move the pointer to the Floppy Disk A icon, as



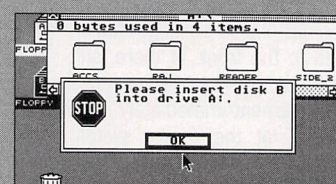
before, but this time double-click on it. A window appears in the middle of the screen (Fig. 1), showing the folders on side 1 of the Cover Disk. There should be four: RAJ, READER, ACCS and SIDE_2.

The next thing to do is re-size the window and reposition it to make copying easier. Aim the pointer at the small box at the bottom right corner of the window and hold down the mouse button. A



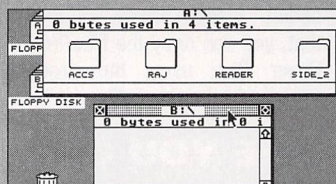
dotted line appears, similar in size to the window. Move the pointer around and the line follows it. When you release the button the window re-draws itself to the shape of the line. Pull the window to a shape like the one in Fig 2 and release the button.

Then aim the mouse at the menu bar, where it says A:\ and hold down the button again. Now when you move the mouse, a dotted box moves around the



screen. Move it to the top of the screen as in Fig 3 and release the button. The window moves to where the ghost-image was. This window, we'll call window A.

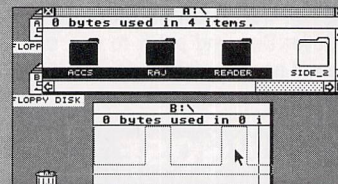
Point the pointer at Floppy Disk B icon and double-click the left button. The ST asks you to insert disk B (see Fig 4), so eject the Cover Disk and replace it with a blank disk. Now click on OK. Another window appears below the first



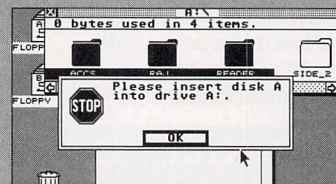
one, but with nothing in it (see Fig 5). We'll call this window B. Now we have a place to put the Cover Disk Files.

2 SHIFT THOSE FILES

The next step is to select the files you need to copy over first. Aim the pointer at window A, anywhere, and click once.

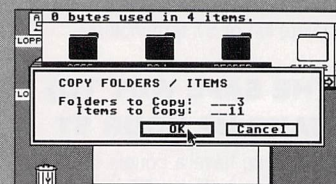


This re-selects A as the active window again. Now point at the first folder (RAJ) and click on it. Then hold down the shift key, aim at the next folder (ACCS) and click on that too. Still holding the shift key down, point at the next folder (READER) and click once more. Now let go of the [Shift] key and check that you now have three black folders in window

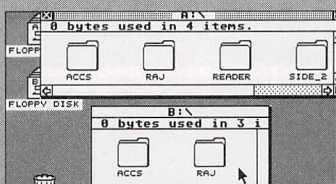


A. Assuming you have, point at any of the three and hold down the left mouse button. A ghost-image of the three icons appears, and you can move it around with the mouse (see Fig 6). Move the pointer part of the image into window B and let go.

Your ST responds by asking you to put in Disk A (that's the Cover Disk), to



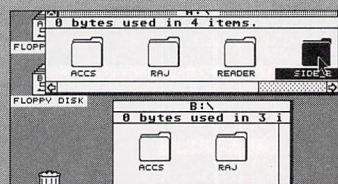
check the files you selected, so swap the disks over again (see Fig 7). Your ST reads it, and a new dialogue box appears (see Fig 8). Click on OK. The copying operation begins and your ST may start asking you to swap the disks over again. If so, just remember disk A is the Cover Disk and disk B is the blank disk (and remember to keep your blank



disk away from the other blank disks, until you mark it!). When the process is finished, your screen looks like Fig 9..

3 THE FLIPSIDE

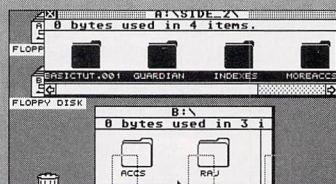
To copy the second side, aim at folder SIDE_2 in window A (see Fig 10). Double-click on SIDE_2 and window A



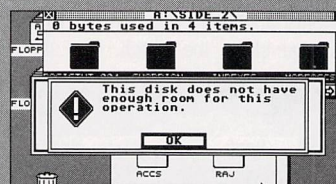
changes to show the contents of that folder. Here you see four more folders (BASICTUT.001, GUARDIAN, INDEX and MOREACCS).

Use the shift-and-click method described before to highlight all four folders. Then drag them over to window B (see Fig 11) and release the button.

During the copy process which fol-



lows, change disks, etc., when your ST asks you, as you did before. At some point your ST tells you that your disk is full (see Fig 12) and stops copying. Examine the contents of windows to see which files didn't make it across and make a note of which they are. It's likely to be the GUARDIAN folder, but check anyway.



Eject the blank disk and mark on it what it is. Insert another formatted blank disk and use the same methods to copy over the last remaining folders or files. When finished, mark that disk too. You now have safe, virus-free copies of your *ST FORMAT* Cover Disk files. Turn back to the Cover Disk Pages to find out what to do with all those goodies... **stf**

SINGLE SIDED?

YOU DON'T HAVE TO DO WITHOUT!

You single-sided drive owners don't have to miss out: to get hold of the B-side of this issue's Cover Disk, all you have to do is send your name and address with a cheque or postal order for £1.75 to: **February B-Side Disk, ST FORMAT, 30 Monmouth Street, Bath Avon BA1 2BW.**

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Do not send it to any other address. Only Discopy Labs can replace your duff disk. We have no spares ourselves and are too busy putting together the biggest and best selling ST mag in the known universe to be able to help. Sorry.

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Before you call have ready the info we need to help you: the model of your machine; the version of GEM/TOS you're using; and details of anything you've got attached to (or plugged inside) the computer. Have the disk handy and your ST up and running, and a pen and paper handy to take any notes.

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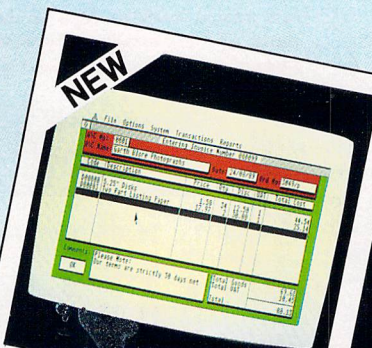
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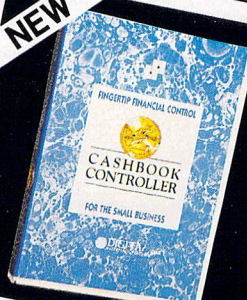
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PUTTING THE BOOT IN

Why do you need a "Boot" or "Start-up" disk? Well, if you use your ST for playing games you don't – but when you run more serious applications such as word processors or databases, a "Boot disk" enables you to initialise or set up your ST in just the way you want it before you run the main program. For example, you can set the date and time so that any files you create are automatically date stamped, or load in utility programs to assist you in a particular way. This "flexible friend" approach means you can get exactly what you require out of your system every time you boot up. What's more, creating your own personal Boot disk is easy – just see the box on page 55.

CALLING IN THE DA

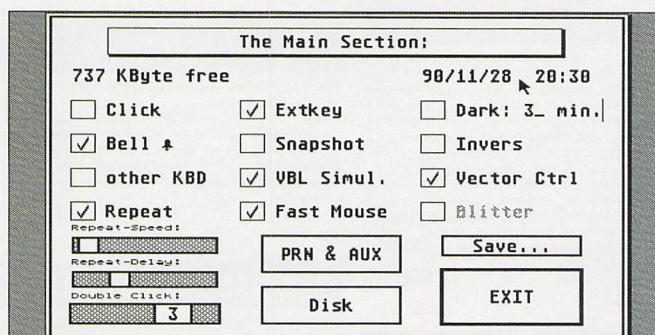
There are lots of utility programs called Desk Accessories (DAs). Put these on your Boot disk, switch on with this disk in the drive and your ST loads the DAs into memory. Here they sit waiting to be called up – hence they're said to be memory resident. Then even though you're in the middle of doing something in your main program, you can pause, select your DA and carry out something completely different, then quit the DA and return to where you were before in your main program – sounds like time travel! Up to six DAs can be in memory at once, and this is where the fun starts – finding the best ones for your particular use. Out of the hundreds available, a few are commercial programs, like *Harlekin* and *Universal Item Selector*, but most of them are Public Domain – available for next to nothing from your friendly neighbourhood PD library. Let's look at a few of the best.

■ **Virtually all of these programs should be stocked by any half-decent Public Domain library. See this month's regular roundup and directory of libraries beginning on page 125. And we've put five of the little darlings on this month's Cover Disk too: turn to the Cover Disk pages, starting on page 45, for more information and a detailed explanation of how to make best use of them.**

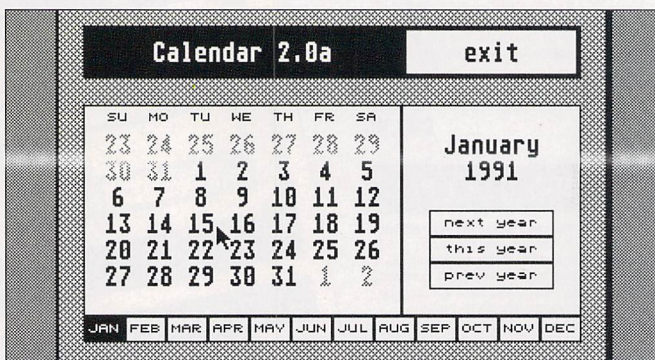
MORE THAN SIX OF THE BEST

There are so many good DAs around that you may want to use more than half a dozen, but the ST's operating system can handle only six resident at one time. Here are some ways around this little problem.

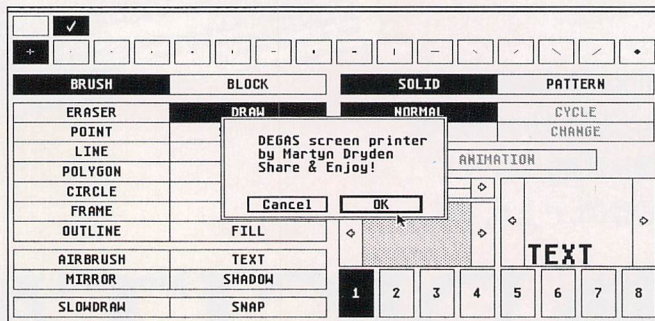
1. You could have more than one Boot disk, with different sets of DAs on each disk, but this is a bit messy.
2. Try using the DA *DC Stuffer*, which enables you to have up to 32 DAs in memory at once. This is available from all the PD services and it works, but only if you have enough memory – at least a Mega ST.
3. Use a DA loading program which enables you to select the ones you want at boot-up time. An excellent choice is *Selector*, yours free on last issue's Cover Disk. (Miss that? See page 148 for info on ordering back issues.) Just put all your favourite DAs on the one disk and the loading program enables you to pick the six you want to suit what you're doing. If you're using the art program *Degas*, for instance, you might not need the mouse accelerator DA but might like the DA which loads in images in Tiny format. And when you switch to word processing, the DAs for disk formatting and word counting are more useful. Unfortunately, some DAs clash with each other and are not compatible – for example, you can't use *Speedmouse* and *Rat-Trap* together – and some early DAs can't run on the latest versions of TOS.



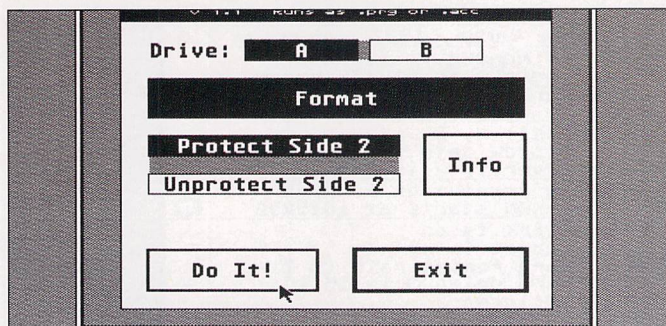
■ **Butler James is from Luxembourg but looks very English. Basically this is a superior CONTROL.ACC replacement with a few added features thrown in, like a virus checker. Not a bad chap, and certainly preferable to the standard Atari Accessory. Check it out for yourself – it's yours on this issue's Cover Disk!**



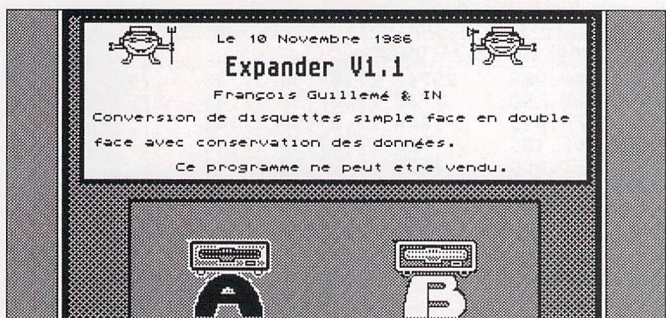
■ **CAL_20A is a calendar utility which does more than simply give you an on-screen display of any month. Click on the current date and it tells you how many days of the year have gone by. You can also go back or forward to any year (within reason, of course) to see what day of the week important events occurred**



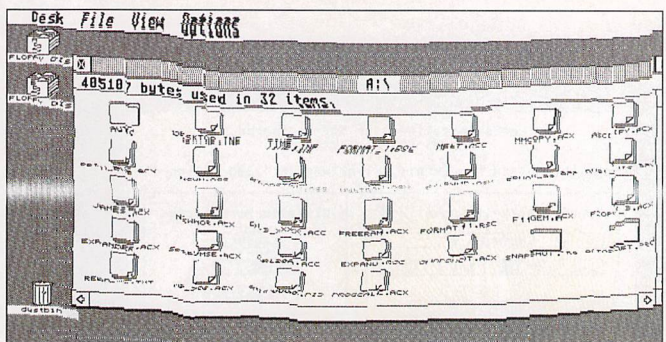
■ **DJ-DUMP, by Martyn Dryden of The South West Software Library, enables you to print out a Degas picture to a Hewlett Packard DeskJet printer, and produces excellent dumps in any of three sizes. You have to load Degas itself first to run the DA version, although it is also available as a stand-alone program. Both versions, however, work in monochrome only**



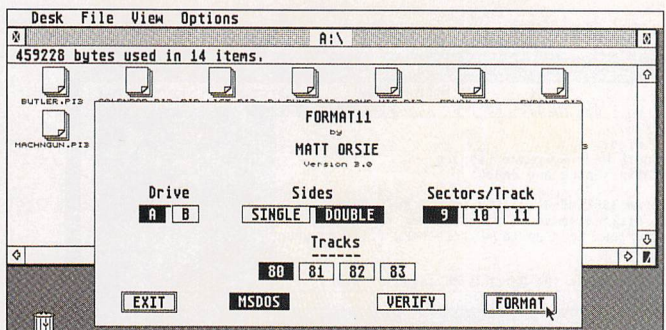
■ **Double Vision** enables you to format a disk so it can be read as a single-sided disk in a single-sided drive but a double-sided disk in a double-sided drive. Whatever you put in the SIDE2 folder created on the disk can be read only on a double-sided drive. This facility could be quite handy if you use two STs



■ **Expander** is from France and also available as a stand-alone program. It enables you to re-format a single-sided disk into a double-sided disk, without losing any data! If you upgrade from an old 520ST with a single-sided floppy drive to a 1MByte double-sided disk drive, you can make loads more space on your disks



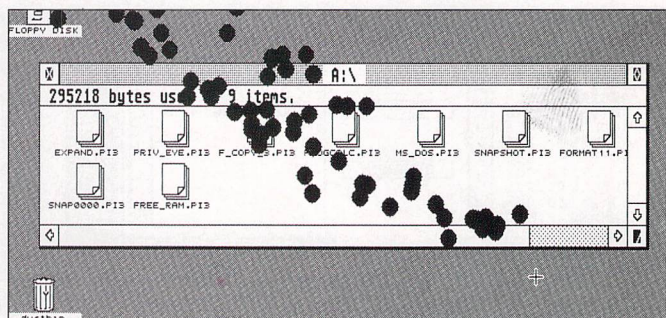
■ **Melt** is another amusing little DA. Click on it and the Desktop slowly starts to melt! Fool your chums into thinking you have a nasty virus in your ST! In fact **Melt** is quite harmless: simply click again with either mouse button and the Desktop is completely restored. Not all DAs have to be serious, you know!



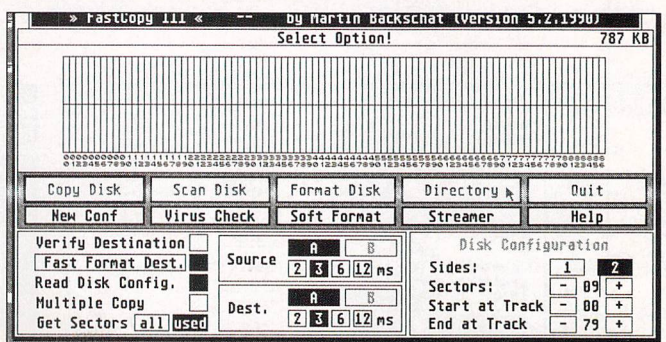
■ **Format 11** is very useful for formatting disks from within a program without having to quit to the Desktop. Using the MSDOS setting with nine sectors and 80 tracks gives you a disk that can be used in a PC-compatible as well as your ST, thus enabling you to transfer text files between them. Use the settings 11 sectors and 83 tracks and you can format a double-sided disk to an amazing capacity of 923,648 bytes! Beware, though: not all disk drives can handle this number of tracks



■ **Edhak 2.0** is an excellent text editing/word processing DA – probably even better than **Word Window** on page 56. This one's actually Shareware – the PD version is like a demo of the full program (though it's fully usable on its own), and if you like it you then send the author a few quid for the complete version



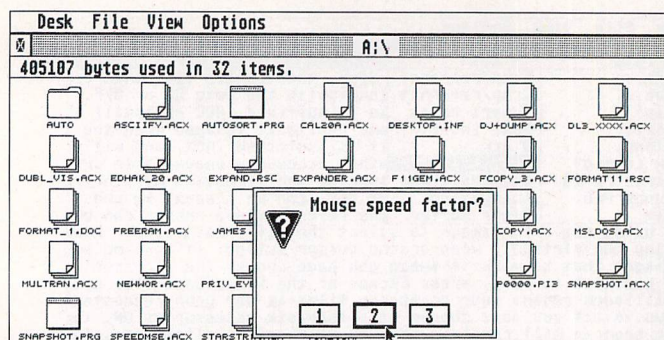
■ **Machine Gun** helps relieve the tension of slaving over your ST for too long. Click on this and the mouse pointer becomes a gunsight. You can blast away at the screen, fill it with lead and enjoy the sound effects. When sanity returns, you can simply press the right-hand mouse button to restore the screen



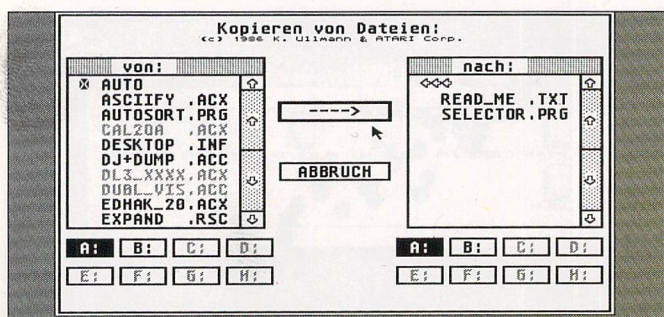
■ **FCopy 3** or **FastCopy** is one of the best DAs ever written. Use it to make a copy of a whole disk, much faster than copying it file by file and with the minimum of disk swapping. It reads the disk you want to duplicate in one go, as long as you have enough memory, and makes a track-for-track "clone" of it on your target disk. **FCopy 3** works with a one or two floppy disk system or a hard drive, makes multiple copies, can format the new disk as it copies, checks for viruses – in fact, it has so many useful features that you'll just have to try it for yourself

MAKING YOUR OWN BOOT DISK FOR YOUR DAs

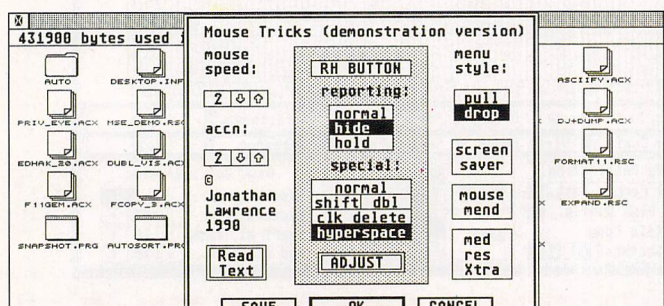
1. First take a new blank disk, put it into your ST and format it. To do this you need to have the ST Desktop on-screen. Move the mouse pointer to "File" at the top of the screen and a menu drops down. Click on "Format" and away you go.
2. Next copy some Desk Accessory programs onto this new disk. You can recognise them easily because DAs always end with .ACC – like CONTROL.ACC which comes with your ST when you buy it.
3. Make sure you have no more than six Accessories on the disk. Then with this new disk in the drive, press the Reset button on the back of the ST. Your screen goes blank for a moment, and then the DAs are loaded into memory. The ST Desktop re-appears, and if you now touch the word "Desk" (in the top left-hand corner of the screen) with the mouse pointer, down drops a little Menu listing the DAs just installed.



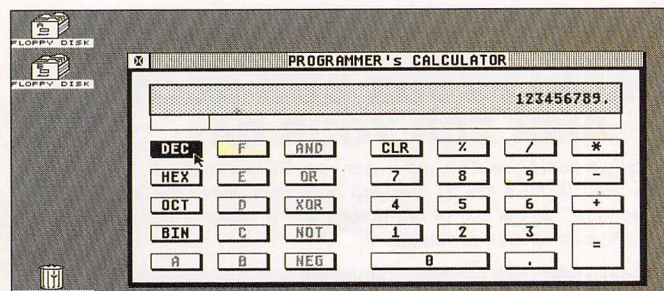
■ **Speedmouse** is one of the first mouse accelerator DAs, and if you haven't used one you should – it really makes a big difference! You can adjust the speed of the mouse and the acceleration, and **Speedmouse** can be turned on or off to suit – but once you've tried it, working without it is like walking in lead boots



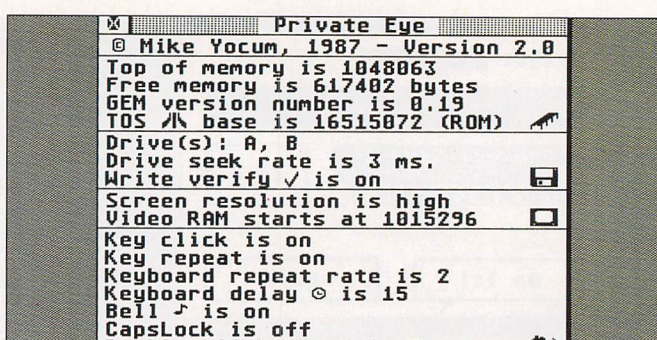
■ **MMCopy** is an awfully useful utility that enables you to copy files from place to place very easily. Just open the windows of the disks involved, select the files to be copied and press the correct button. Even if you've got a single floppy drive system, this has its uses: you can open one window to show the contents of a folder for copying. **MMCopy** probably does a lot more but nobody around here reads German – can anybody out there translate the README.DOC for us illiterate folk?



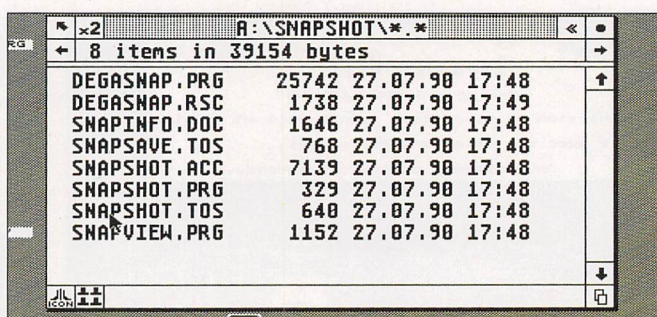
■ **Mouse Trix** is an amazing new DA from South London. The PD version is a demo of the commercial release, which costs only a fiver itself. **Mouse Trix** includes a mouse accelerator and screen saver, and it gives you control over GEM's drop-down menus in your programs. It has loads of other features too



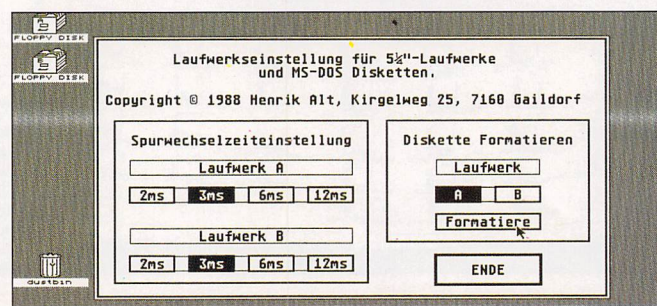
■ **ProgCalc** is a programmer's calculator. You can use it as an ordinary calculator, and input values by either clicking on the appropriate buttons with the mouse pointer or by using the ST keypad. But its real use is to make calculations in those mysterious number systems used by programmers and other boffins, like Binary or Hexadecimal. Values can be converted between the various options, and the results are held in the calculator's display screen even when you exit from the program



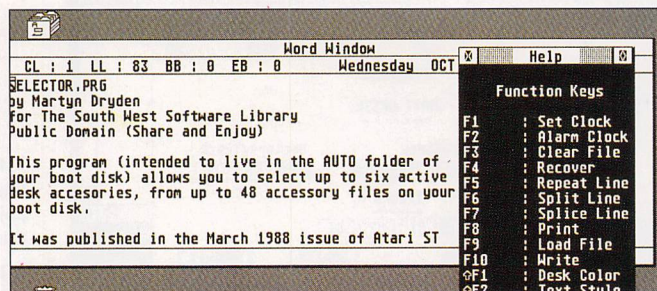
■ **Private Eye** shows you your ST's inner secrets – like which version of GEM you're running and the amount of RAM (memory) available. Some of the details shown may be a bit of a mystery to the beginner, but as you get into it you'll soon understand things like Drive Seek Rate and Top of Memory – er, won't you?



■ **Snapshot** is a classic DA, widely used, which enables you to grab an image from any part of the screen. You use the mouse pointer to draw a rectangular box of any dimensions anywhere on-screen. You can define just a part of the screen or all of it, then save what's framed by the box to disk as either an IMG, DOODLE, DEGAS, or NEO file, whichever you choose, with any name you like. You can then load the file into your own art or graphics program. **Snapshot** is also yours free on the Cover Disk



■ **MS-DOS** is another disk formatting DA, which can format on either your internal 3.5 inch drive or an external 5.25 inch drive if you have one. It formats disks to MS-DOS standard so they can be used in either a PC-compatible or ST machine. (If you have TOS 1.4 or above, you have this MS-DOS feature built in)



■ **Word Window** is the latest version of the WP program **Word-400 V3**. It gives you all the facilities of a simple-to-use word processor and you can call it up anytime, enabling you to write text and save to disk whenever you want. You can also load in a text file, even one produced by a completely different WP program. On-screen HELP can be displayed, and it even prints out the document to a printer if you want. Some of the features in this DA are better than those in commercial WP programs! *stf*

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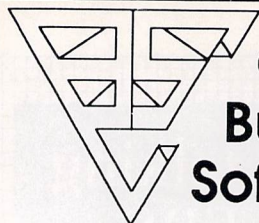
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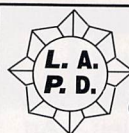


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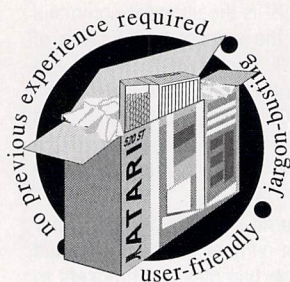
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STF18



getting started



with GFA Basic

Bored with the games on your ST? GFA Basic has the reputation for being one of the best programming languages, especially for beginners. James Beswick begins a new series helping you to program with ease

After you've finished playing the games bundled with your ST pack, you may want to start programming your own masterpieces. By far the best language to start with is GFA Basic. Admittedly, you're not going to write a four-way parallax scrolling, two-player shoot-'em-up overnight – that's not the idea. Just writing a small utility actually gives a great feeling of satisfaction – especially if it works!

To get started, load the GFABASIC.PRG from this issue's Cover Disk. GFA Basic is what is commonly called an "interpreter." This means that to program in this language, GFA Basic must translate or interpret the lines in your program into machine code – the only language the computer can understand. You write your BASIC program using GFA instructions, and when you decide to run it GFA examines each line in turn and translates it into machine code instructions.

When you load GFA the screen you are faced with is called the "editor" – this is where you design and edit your programs. A useful feature of GFA is that it checks the validity of the line when you press [Return]. If it is incorrect in any way, your ST bleeps at you and also displays the message, "Syntax Error." Another handy feature of GFA is the way it indents lines of code to make them easy to read.

The lines of your programs are "executed" in the order they appear on the screen. When you're in the editor window you can click on "Direct Mode," type a command and then press [Return] to execute it immediately. You can read the file GFABASIC.DOC for straightforward instructions on how to use the editor.

GRAPHICS COMMANDS

GFA Basic has an impressive range of graphics commands, and they all do what they say they

do! The commands PLOT, BOX, CIRCLE and TEXT are all fairly straightforward.

The screen resolution you are currently running affects the graphics quality and the number of colours you can use. For this tutorial, everything demonstrated is especially written for low resolution, although the commands all still work in medium or high res.

Pixels are the tiny dots that make up the screen image. In low resolution, you have 64,000 of these (320 multiplied by 200) – a television picture, by comparison, is made up of about a quarter of a million pixels. To demonstrate the size of a pixel, press [Shift] and [F9] simultaneously and this takes you to "Direct Mode" in GFA Basic. Now type in the line:

```
PLOT 159,99
```

Press [Enter] and you now see a tiny black dot in the middle of the screen. This is the purpose of the PLOT command. The first value, 159, is the number of pixels to the right of the screen the dot is to appear, and similarly, the second value, 99, is the number of pixels down the screen the dot is to appear. These are called X and Y values respectively. Whenever you see X and Y in a command, you should replace them with these horizontal and vertical values.

Luckily, we don't have to plot all the shapes like this. To draw a circle, for instance, we can use the CIRCLE command. CIRCLE X,Y,R is similar to the PLOT command, except it has an extra value, R. This is the size of the radius (the straight distance from the centre of the circle to its edge), measured in pixels. Try this:

```
CIRCLE 159,99,50
```

Press [Enter] and a circle with a radius of 50 pixels appears in the centre of the screen, as long as you're using low resolution

If we wanted a box the command we need is, amazingly, called BOX. This is slightly different, though, since BOX X,Y,X2,Y2 has two extra X and Y values.

The first set mark the position of the top-left corner of your box and the second set, this time called X2 and Y2, mark the bottom-right corner

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You don't have to spend a thing to get straight into this programming lark. Just use the terrific GFA Basic 2 included free on this issue's Cover Disk – and see our Cover Disk pages, beginning on page 45.

of the box. Type in the following command:

```
BOX 0,0,319,199
```

In low-resolution mode this draws a box that is the whole width and height of the screen. The various commands PLOT, CIRCLE and BOX are demonstrated in three files which you can easily find in the GFADEMOS folder. Press the [Escape] key to leave "Direct Mode," then press [F1] and use the file selector to load these files.

THE WRITING'S ON THE WALL

There are a number of ways to write text to the screen. One is to use the TEXT command. This enables you to create certain effects with the text, but for now, we won't use these. Go back to "Direct Mode," type CLS and press [Return] to clear the screen. Now type the following line:

```
TEXT 30,40,"Hello World!" [Enter]
```

"Hello World!" appears 30 pixels across and 40 pixels down on the screen. But notice the quotation marks you typed are not displayed. This is because the text you want displayed must be contained inside them. As you might guess, this causes some problems, one being the fact that if your text contains quotes, you get an error message, since you can't have quotes within quotes, at least not at this stage.

Besides using the TEXT command you can also use PRINT to display information. For example, on the Direct screen try typing the following:

```
PRINT "Hello World" [Enter]
```

The words Hello World magically appear on the screen. You can change the position at which these letters appear on the screen by adding the X and Y co-ordinates:

```
PRINT AT(5,5) "Hello World"
```

The X and Y co-ordinates are used differently in

WHAT YOU CAN GET ON YOUR SCREEN

Resolution	Pixels Across (X)	Pixels Down (Y)	No.Colours
Low (0)	320 (0-319)	200 (0-199)	16
Medium (1)	640 (0-639)	200 (0-199)	4
High (2)	640 (0-639)	400 (0-399)	2

the PRINT command. A low resolution screen can display 40 characters horizontally and 20 characters vertically, medium res. can display 80 characters by 20 and high res. screens can show 80 characters by 40. The PRINT AT command instructs your ST to position the text according to these conditions.

I WANT SOME COLOUR!

Colours are unfortunately slightly bewildering for the beginner. It's because of their red, green and blue (RGB) format. On the ST, you're allowed 16 colours on screen at any one time, mixed from a palette of 512 colours (unless you've got an STE, in which case you have 4,096 of them available to you). To complicate things even more, the way monitors and televisions produce their colours is by mixing together a controlled amount of the primary colours red, green, and blue. For instance, maximum red and maximum blue make the colour purple. To set the ST's colour palette, we use the command SETCOLOR

HOW TO MIX THOSE COLOURS

COLOUR	R	G	B
Red	7	0	0
Green	0	7	0
Blue	0	0	7
Yellow	7	7	0
Purple	7	0	7
Cyan	0	7	7
White	7	7	7
Black	0	0	0

C, R, G, B (note the American spelling). C is the number of the colour you want to set and its range is from zero to 15. Zero is the background colour and 15 is the text colour. R, G and B are the values which determine what the colour is. This does need a bit of practice, though, since it's quite tricky. The maximum brightness you can have for a given colour is seven. Run the program called SETCOLOR.BAS and experiment with the values until you get the hang of it.

MAKING YOUR FIRST DEMO

Over the next few parts of this tutorial, we'll show you how to write your own demo. OK, it's not going to be the supreme demo, but it should demonstrate the commands pretty well. However, as with all programs, you've got to have a plan. This is because you can guarantee any program over four lines long won't work straight away! Luckily, I've already planned it out (and here's one I prepared earlier...). It's in two parts – the introduction and the demo. Let's concentrate on the introduction.

This is a "GFA DEMO" logo, with multi-coloured stars twinkling in the background, and a "pen" writing a short message on the screen. Sounds complex? All will be revealed! Go back to the editor and load the file DEMO.BAS from the Cover Disk. Don't run it yet, though! Let's take a quick look at the programming first.

You are going to find some commands you don't understand yet, ones that I've introduced

into this routine. "CLS" is the simplest command there is – it clears the screen. In the place of the logo which we'll design next month, I've placed a white, empty box in the middle of the screen, using the BOX command. I've also used variable techniques – these are similar to the algebraic techniques that you hated at school! More on those soon.

RANDOM is also new to you. The computer generates a random number between zero and the number within the parentheses (brackets to some). This number is subsequently stored. COLOR is a command that utilises SETCOLOR. Unfortunately, one problem with GEM (see *Jargon-busters*, starting on page 65), is that when you use a colour, you don't necessarily get the one you want! More on this later.

Other new commands include EDIT, which leaves the program and returns to the editor. With the REPEAT and UNTIL commands, you create a loop around a particular part of your program – it continues to execute that part until the particular condition you've specified is true.

Well, that just about does it for this month – be here next month when we look at loops, conditional statements, variables, and using commercial graphics packages to create graphics for your programs. We'll also be putting the finishing touches to the introductory screen in the GFA Demo, and then we can get on and write the main routine. **stf**

■ If you're puzzled by any of those techie terms, turn to **FORMAT's** special *Jargon-busters* section, starting on page 65



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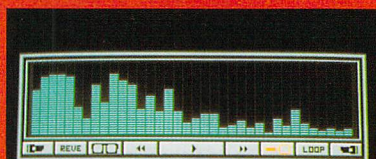
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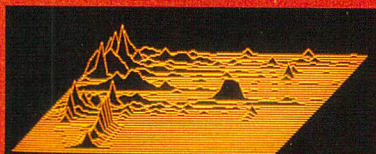
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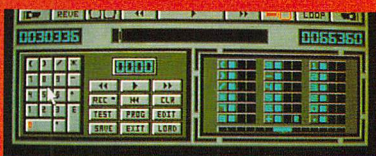
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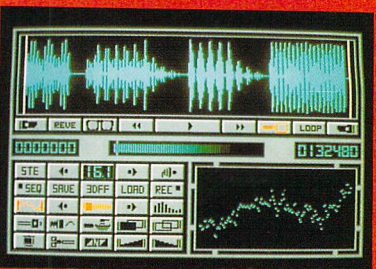
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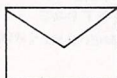
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FORMAT gold awards 1990



Drumroll. Fanfare. Spotlight picks out tiny figure on incredibly distant stage. Yes, it's the biggest and bravest awards ceremony to celebrate the events, achievements and cock-ups of 1990. Your host with the post, Steve Carey, presents the prizes for the best and worst of the past year

That was the year that was, folks. On the one hand, it was the year, regrettably, that the STE's incompatibilities, the TT's delays and the Stacy's lack of lasting power showed that Atari still have trouble walking and chewing gum at the same time. Yet on the other hand it was also the year that saw a bigger, bolder and downright better world of ST games and indeed serious/productivity software than we've ever had the pleasure of getting to know before.

1990 gave us such astonishing pieces of software as Neodesk 3, Lattice C5 and DeluxePaint ST, and truly breathtaking games such as

F-19 Stealth Fighter, Kick Off 2 and Sim City. It was a year in which some people continued to complain – and others rejoice – that the ST is a damn fine games machine.

The wisest simply acknowledged that the ST's core business in Britain has always been as a games machine anyway, and that if this gave it a "Trojan Horse" effect and opened up opportunities for serious and productivity software, that was no bad thing. ST owners are now spoilt for choice when it comes to the range of programs available for their machine. And it's not going to stop in 1991 either.

On the one hand, 1990 was the year that a

newcomer called ST FORMAT moved purposefully centre-stage, to become the bestselling magazine serving the ST owner in Britain. Readership shot up from 43,246 (July to December 1989) to 50,007 (January to June 1990) and way beyond, while the size and range of the magazine increased considerably.

However, it was also the year that one ST magazine went bust (*Stampede*); another went quarterly and ever closer to a much rumoured demise (*ST World*) and yet another dropped its independently audited status, went through three editors and crowned the year by putting a virus on its December Cover Disk (*ST User*).

READERS' AWARDS

Two issues ago we asked you to make your nominations. We were amazed by the quality as well as the quantity of the replies. Thanks for taking the time. Without more ado, these are the ST FORMAT Reader Awards 1990.



ST game of the year: **SIM CITY**

Heavily nominated: F19 Stealth Fighter; third placed Kick Off 2 and second placed MidWinter. The overall winner is the exceptionally well-thought out and intelligent "world simulator." Fans will be delighted to know that programmers Maxis are putting the finishing touches to the follow-up, *Sim Earth*, due from Ocean in a month or two. (*Sim City* £29.99 from Infogrames ☎ 071 738 8199. Reviewed in STF 12: 92%)



■ Infogrames' highly regarded "world simulator," *Sim City*, clearly won the approval of a great many game-players



"Serious" ST software program of the year: **DELUXEPAINT ST**

Heavily nominated: Lattice C5 and *That's Write*, third placed TCB Tracker and second placed Neodesk 3. But the winner, by a long, long way – influenced no doubt by the useable demo on STF 15 – goes to the best thing that's ever happened to the ST's graphics, *DeluxePaint ST*. (DPaint ST £59.99 from Electronic Arts ☎ 0753 49442; reviewed in STF 15: 96%)



■ Many computer artists thought that Electronic Arts' *DeluxePaint ST* had changed the face of art software in 1990



ST company of the year: **EVESHAM MICROS**

Heavily nominated: third placed Silica/SDL and second placed Gasteiner. But the clear winner, by a two to one majority over second place, is

Evesham Micros, now the biggest seller and repairer of STs in Britain. (☎ 0386 765500)



ST software house of the year: **MICROPROSE**

Heavily nominated: HiSoft (the clear "serious" software winners), Ocean, Mirrorsoft (though a number of people thought the Bitmaps were publishers – which, as Renegade, they now are), third placed Electronic Arts and second placed Psygnosis (who may be somewhat surprised to see themselves proclaimed as heroes of the ST this year). The winners, by a narrow margin, picked up a surprising number of votes for *Rainbird* – one assumes attributable to *MidWinter*.



ST Public Domain library of the year: **GOODMAN PDL**

Heavily nominated: South West Software, MPH and Floppyshop; third placed Softville PD and second, ST Club. First, by the narrowest of margins, Mike Goodman's highly professional and comprehensive service. To make it clear how close it all was, any of the above mentioned could have won, with no-one in the ST FORMAT office crying "Foul."

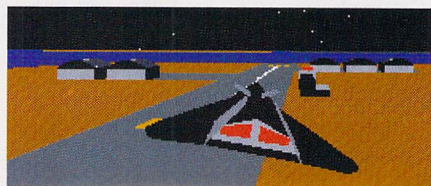
It's good to see that the ST is so exceptionally well-served in this department, and this tight contest suggests strong loyalty to a wide range of libraries and excellent service from the top dozen. There were also many others up there, including PDom, LAPD, Riverdene and Page 6.

THE ST FORMAT TEAM AWARDS



Game of the year: **F-19 STEALTH FIGHTER**

As a recent release, *Captive* loses out. *Operation Stealth* didn't get as many votes as it deserves, while Mark "I've been up all night playing *Sim City*" Higham was smug as hell when that came out on top, in the reader poll. *MidWinter* and *F-19 Stealth Fighter* are hard to separate – stop looking so chuffed, Microprose! – but the result, narrowly, goes to their superb flight and combat simulation. (*F-19 Stealth Fighter* £29.99 from Microprose ☎ 0666 504326. Reviewed in STF 12: 96%)



■ Microprose's *F-19 Stealth Fighter*: fab graphics plus a great game to boot mark this out as ST FORMAT's game of 1990



Art and graphics program of the year: **DELUXEPAINT ST**

Not cheap, but worth every single penny. (£59.99 Electronic Arts ☎ 0753 49442)



Hard drive of the year: **VORTEX DATAJET, SILICA**

When we surveyed hard drives for a recent issue (STF 17) this was the one we had to guard most closely: twice we found members of staff trying to sneak it out. If you need the best rather than the cheapest, this is the one for you. (£499, 30MBytes; £1,499, 180MBytes. Silica ☎ 081 309 1111)



Printer manufacturer of the year: **STAR**

No other nominations. Star have driven the price of printing relent-

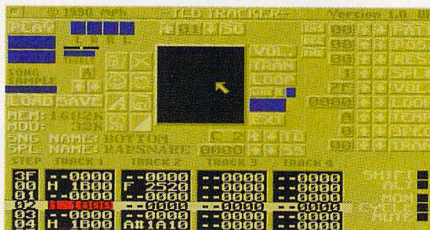
lessly down, with the LC-200 and LC24-200 at exceptional value. (Apologies once again for the incorrect pricing in our reviews: the true prices, considerably lower than those quoted in STF 17, are £297.85 and £366.85 respectively).



Music software of the year: **PD - ACCOMPANIST/ HENRY COSH SEQUENCER HOME - TCB TRACKER**

No longer do you need to be a tech-head to make music on your ST. The former (featured in a full, special edition on STF 16) is available from any PD Library worth its salt – see this issue's PD section, beginning page 124, for a directory. The amazing *TCB Tracker*, written by one of the best demo writers in the business (reviewed in STF 16: 93%), is just brilliant (£39.95 from MPH ☎ 0603 503382).

Incidentally, your professional musicians go for C-Lab's *Creator/Notator*. If it's good enough for Fleetwood Mac, Madonna, Betty Boo and Jazzy B, it's good enough for the rest of us too. Not only do you get cracking software, there's also excellent support (£299, £499; Sound Technology ☎ 0462 480000).



■ For music software, 1990 really came up with the goods – like *TCB Tracker*, written by one of the best demo writers



Software utility of the year: **NEODESK 3**

Harlekin comes close, but for sheer everyday usefulness *Neodesk* just beats everything senseless. Warning: do not use a friend's ST with *Neodesk* installed or you're bound to want it yourself! (£39.95 GST Software ☎ 0480 496666)



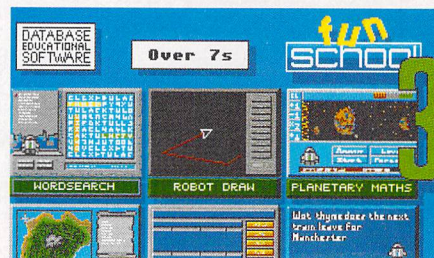
Educational program of the year: **FUN SCHOOL 3**

At last! Education software that does what it's supposed to do: make learning fun. There was really no competition when it came to deciding this one (£24.99, over 7s, 5-7, and under 5s: ☎ 051 357 2961).



Educational software house of the year: **DATABASE EDUCATIONAL SOFTWARE**

Fun School was the program that moved the goalposts as far as expectations of educational software sales are concerned, giving a major boost to the whole market. Edition 3 is a superb package, too. (☎ 051 357 2961)



■ Not only did Database Educational Software become software house of the year, they also produced *Fun School 3*



Best PD program: **OPUS 2.2 SPREADSHEET**

Rather than rewarding some frivolous demo that's great fun but entirely useless ("*Life's A Bitch*," for instance), or some of the excellent art (*Ani ST*) or music (*Henry Cosh Sequencer*) programs, we've gone instead for this superbly implemented productivity item, which could easily be available as a full commercial release without raising eyebrows. See the review in last month's Public Domain round up: reviewed STF 18: 93%.



Best ad: **GREMLINS 2**

Nice one from Elite: direct, appealing and on the case.

DUSTBIN AWARDS



Cock-up of the year: **THE STE**

Despite strong competition from the ST magazine that put a virus on its Cover Disk (ST User, December), Atari simply sailed away with the tragedy of the STE. Firstly, much of the software was incompatible, then a faulty chip made it hard drive-unfriendly. Both problems have subsided, but the nasty taste in the mouth remains. Signs are that Atari are on the way to recovery, but they cannot afford another such Golden Turkey.



Worst full-price commercial game: **WEB OF TERROR, IMPRESSIONS**

Hotly pursued by *Bubble Plus* (Info-frames, STF 12: 38%), *Web of Terror* set new standards (STF 16: 35%). Other nominations include another Impressions turkey, *Rorke's Drift* (STF 13: 46%) and the immensely disappointing *Chuck Yeager's AFT* (Electronic

Arts, STF 17: 34%). I'm afraid that this is just not good enough, chaps, not by a long chalk!



Most delayed game: **BAT**

It was great when it finally arrived. (UBI Soft. STF 17: 92%)



Worst ad: **THE ULTIMATE RIDE, MINDSCAPE**

Purlease! Not in any sense appealing.



■ *Corporation*, by Core, was one of 1990's most disappointing games – failing to live up to expectations aroused in previews



Most indecent ad: **RANX**

Not, by any chance, a desperate attempt by UBI Soft to stir up a little controversy? In any case, it's about time they got their finger out.



Most disappointing game: **CORPORATION**

It's still a good game (88%) but Core's monster was not as brilliant as late previews suggested. **stf**

GOLDS ALL ROUND

Each category winner awarded an ST FORMAT Gold Award is hereby entitled to state the fact and display the ST FORMAT Gold logo in its advertising, publicity and literature. Congratulations must go to all those who have helped make the past twelve months some of the most exciting since the launch of the ST.

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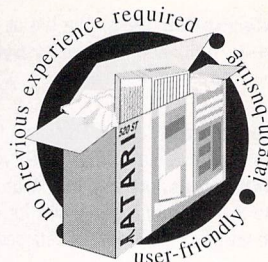
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jargon-busters

Get to grips with the gobbledegook and beat those buzzwords with the ST FORMAT drivel-dictionary



Words like this are explained in their own entry

Alert messages: Your ST warns you that certain operations, like **formatting** a disk or erasing files, can be dangerous to data. A **dialogue box** pops up with an alert message which you must read before proceeding

Application: The ST's posh name for a program, so named because you apply your ST to the task in hand. Also what you do with Vicks Vapo-Rub

ASCII: Acronym for American Standard Code for Information Interchange, the standard method for sending data from computer to computer. Every character and punctuation mark has a unique code number

Auto-boot: See **Boot**

ASIC: Acronym for Beginners' All-Purpose Symbolic Instruction Code, which is the most popular programming language for newcomers to the ST

Baud Rate: Pronounced "board"; the speed in **bits** per second that your ST communicates with another computer. All transmissions over telephone lines conform to a standard baud rate of either 300, 1200, 2400 or 9600 baud. It is *not* the rate at which you get bored with playing *Rorke's Drift*

Bee Icon: The ST changes the mouse pointer to a bee when it's busy searching for data from a disk

Bit: The smallest unit of computer data. Eight bits make a **byte**, four bits make a **nibble** (See also **Kilobyte**, **Megabyte**)

Boot: You boot your ST by (a) turning on the power or (b) pressing the reset switch when you have a disk in the drive. The ST reads the first part of the disk (the bootsector) and then displays the **Desktop**. The bootsector can be set to auto-boot a specific program, which runs immediately upon booting with no input required from you. Also a shoe with tall sides

Byte: Computer **memory** is organised into groups of eight data **bits**, called bytes – short for "by eight" (see **Nibble**)

Cartridge: Cartridges plug into the port on the side of the ST and often contain a program on a chip, which loads instantly since it does not require the use of the disk drive

Click: You perform a click by positioning your mouse pointer on an **icon** on screen and quickly pressing and then releasing a mouse button once

Close box: The small box at the upper left-hand corner of a **window**, used to close an active window – that is, one you're working in

Colour Palette: The ST has the capability to dis-

play 512 different colours (STes can show 4096), 16 of which can be stored in a special area of **memory**, known as the colour palette. These 16 can all be on screen at once

Cursor: The square black marker that shows where the next typed character is to go. Also the editor when he sees how late we all are with our pages

Data file: Used by programs to store incidental information, or by programmers to store user instructions. The data file **icon** is like a sheet of paper with one corner folded over

Desk accessory: Accessories are programs with a filename ending in .ACC. Stored on the **root directory** of a disk, these are automatically loaded into the ST's memory on booting. They can then be run at will, by selecting the relevant name from the **GEM** Desk menu, at the top left of the **Desktop**

Desktop: See **GEM Desktop**

Dialogue box: Messages your ST displays, informing you of the effects of some operation or other. You cannot remove a dialogue box from the screen unless you acknowledge the message by **clicking** on one the buttons

DiskCopy: The ST's copy program. Move Floppy Disk Icon A on top of Floppy Disk Icon B and it attempts to make an exact copy of the source disk, but it's not infallible. For example, it can't copy non-standard disks (like the *FORMAT* Cover Disk)

Disk Drive: Your ST's main storage device. It uses this to read from the **floppy disk** and write data to it. The ST displays a Floppy Disk **icon** on the **Desktop** for each disk drive you have connected

Double-click: Two quick **clicks** on the left mouse button. Double-clicking opens **files**, runs programs and enters **folders** and disks

Dragging: The method for moving **icons** around the **Desktop**. Point at the chosen object, press the left mouse button and hold it down. The object selected should turn into an outlined **ghost-image** which moves around the screen as you move the mouse. Let go of the mouse button to deposit the icon in its new position

DTP: Acronym for Desk Top Publishing, the high-tech method of creating newspapers, magazines and books using computers for typesetting and printing

File: A chunk of information stored on disk. Could be a program, a data block, a document or any other collection of storable information. Also a thing you use on your fingernails

File Copy: To copy individual files from a **window** to a disk or from a window to another window. You reposition a file **icon** in its new home by **dragging**

Floppy Disk: The actual storage medium where data is kept. Made of a similar material to audio tape, but it's flat, round and er, floppy. Kept safe inside a plastic sleeve, which you insert into a **disk drive**

Folder: The ST's name for a directory. You can store many **files** inside a folder and move them all around at once by moving just the folder **icon**. To access a file which is inside a folder, simply **double-click** on the folder icon

Format: You prepare a blank disk to take data by formatting it. The ST checks the disk and creates spaces which can be used to store files. Formatting erases all data which is on the disk in the first place, so use it with care

Full Box: The opposite of the **Close Box**. This opens the selected **window** up to full screen size to enable you to see many more files than you'd see with a small window

Function Keys: The topmost row of keys on the ST keyboard, marked F1 to F10. These can have a multitude of different functions (or none at all), depending on what the particular program you're running uses them for. Many serious programs use them to do repetitive tasks at the touch of one key

GEM: Acronym for Graphics Environment Manager. This program is the part of the ST's operating system which handles all the **windows**, **icons**, and graphics functions used on the **Desktop**

GEM Desktop: The main ST screen which includes (at least) two Floppy Disk **icons**, the **Menu Bar** and the **Trash** icon. You get this when the ST **boots** as normal, before running any programs. From here, you can select various functions and any **Desk Accessories** you have loaded

Ghost: An outline of an **icon**, **file** or **window** which shows the current position of that item as it is dragged around to a new location on the **Desktop**. Also a nasty ST **virus** which flips the up and down axis of your **mouse**, so it operates backwards

Hard Disk or Hard Drive: Another storage medium, this time with a non-removable magnetic surface. It's faster than a **floppy disk** and can hold a lot more data

High Resolution: One of three video display modes available on the ST. High Resolution consists of 640 dots horizontally by 400 dots vertically and is only black and white. You need a high resolution monochrome **monitor** to use this mode. Also the Resolution least likely to get broken after New Year

Icon: A small picture on the **Desktop**, representing an item such as a **disk**, **file** or **folder**. You select files and operate programs by **clicking** on the appropriate icon

Information Line: The line at the top of a **window** which shows how many **bytes** are used and how many items there are

Input/Output (I/O): The name for the communications process that occurs when your ST talks to its **disk drives**, printers, etc. Input is data that comes into the ST, from a floppy disk for example. Output is the reverse – for instance, data sent out to a printer

Interface: A hardware connection that enables your ST to communicate with a **peripheral** device. Could be a printer cable, or a **hard drive** connection, for example

Kilobyte (K): 1024 bytes (not a thousand bytes, because it's binary for 2 to the power 10). Also what you can get from an angry Rottweiler if you're not careful

Low Resolution: Another of the ST's video display modes. Low Resolution has a display size of 320 horizontal dots by 200 vertical dots and can display 16 colours on screen at once. If you have a **high resolution monitor**, you cannot access Low Resolution mode. Also the Resolution most likely to be broken after New Year (the one about drinking, prob'ly)

Loop: See **Loop**

Medium Resolution: The third of the ST's three video display modes. Medium Resolution has a display size of 640 horizontal dots and 200 vertical dots and can display four colours on screen at once. Medium resolution cannot be accessed on a **high resolution monitor**. Also the New Year's resolution which lasts about three months (the one about smoking, prob'ly)

Megabyte (M, MByte): A thousand kilobytes (see **Kilobytes, Bytes**).

Memory: The electronic circuits inside the ST which store data and programs. There are two types: RAM (Random Access Memory) which loses its data if the power goes off; and ROM (Read Only Memory), where the main operating system is kept, which retains its data without power, but cannot be written to. Memory is also, er, um, what is it now? Er. Never mind

Menu Bar: The bar at the top of the **GEM Desktop**. When you start up, it displays the Desk, File, View and Options menu titles. Other **applications** may have different headings

MIDI: Acronym for Musical Instrument Digital Interface. A built-in standard **interface** designed to connect your ST to a musical instrument such as a keyboard or a drum machine

Modem: Short for MODulator/DEModulator. A device which enables you to connect your ST to a telephone line and thereby communicate with other remote computers and bulletin boards

Monitor: A device like a TV set, but without the ability to tune into BBC1 or any other transmission. You plug it into the monitor socket on the ST which sends pure video signals straight to the screen, for a better, clearer picture. But no *Neighbours*

Mouse: The device which moves the pointer around on screen. You slide it around on a flat surface and

the small rubber ball inside picks up the movement and relays it back to your ST, which updates the pointer's position. A mouse also has two buttons on the top for selecting files and operating programs by **clicking**. Also a small furry rodent which gets Mum standing on a chair in the kitchen screaming

Move Bar: The bar at the top of a **window**, just above the **Information Line**. You click on this bar to drag the whole window around the **Desktop**. Also what you do when you're chucked out of the pub

Nibble: Four **bits**, or half a **byte**. Also something you hope to get when you're out – er, fishing

Parallel Interface: A standard **interface** for connecting your ST to a high-speed printer. It's the one marked "Printer" on the back of your ST

Partition: Hard disks are subdivided into smaller sections called partitions. To the ST, each partition looks like a separate **disk drive**, but they are actually part of the same block of storage. Also the thin plasterboard wall which allows you to hear next door when they're fighting or bonking

PCB: Acronym for printed circuit board, which all the chips and components of the ST are soldered onto. Also PolyChlorinated Biphenyl, a nasty gas pumped into the atmosphere when you burn toxic waste

Peripheral: Any device which can be connected to your ST, like a **monitor**, printer, **disk drive**, etc

Pixels: The tiny dots which make up the ST's video display. The name comes from "picture element"

Pointer: The arrow which you move around the **Desktop** to select files and operate programs. Also a dog which seems to have something against wounded pheasants and blows the whistle on them

Program File: A file which contains an **application**. Program file **icons** on the **Desktop** are boxes with a shaded top edge

RAMDisk: A program that creates a pseudo-disk drive, which functions as a **disk drive** but is actually just a spare part of **RAM**. Very helpful for single drive owners who get tired of disk swapping, since it enables you to perform copy operations in two quick moves

RAM, ROM: See **Memory**

Reset Button: The small, spring-loaded, grey button at the back of your ST. Press this and the system re-boots (see **Boot**) and forgets whatever it was previously doing. This doesn't kill any internal **viruses**, though: to do that, you need to switch off the main power for at least 30 seconds

Resolution: See **High, Low** and **Medium Resolution**

RGB: Acronym for Red, Green, Blue. These are the three primary colours which the ST uses to create its colour video display. An ST has eight levels of intensity for each colour, creating 512 different colours. An STE has 16 intensity levels, giving 4096 colours

Root Directory: Where a **file** is said to be when

it's written directly onto a disk and isn't in a **folder**. Also a very very small map which shows termites the way to the bottom bit of a tree

RS232: An industry-standard connection for **peripherals** which require serial information. Serial information is sent **byte** after byte down the **interface** cable. On the ST's casing the RS232 port is marked "**Modem**," although serial printers may also be connected here

Scroll: To move information up, down left or right, using the slider bars at the side of the **window**

Scroll Bar: One of two bars that border an active **window**. **Click** on the arrows at the ends of the bar and the information moves in that direction. The shaded portion represents information which is not currently visible on the screen. The white block shows the portion which can be seen and it can be moved with the arrows, by clicking on the shaded part or by **dragging** the block itself

Sector: A section of a **track** on a **floppy** or **hard disk**. On an ST disk, each is 512 **bytes** long

16-bit: A computer (like your ST) which can read in and write out 16 **bits** at a time. Consequently it runs a lot faster than 8-bit machines.

Size Box: The small box at the lower right-hand corner of a **window** which can be **dragged** to expand or shrink the window. Doing so is called "sizing"

Spacebar: The long horizontal key at the bottom of the keyboard which prints spaces when hit. Also a pub on the moon; the Ed's been there and he says it's got no atmosphere

TOS: Acronym for Tramiel Operating System, the main program stored on **ROM** inside the ST. It controls all the ST's functions and the operation of the **disk drives, mouse**, printer, video display and so on. In short, the brain of the ST

Track: A circular path on a **hard** or **floppy disk**, which contains several **sectors**. The data on the disk is arranged into tracks like those on a record, so they can be read or written quickly

Trash: The **GEM Desktop icon** which is used to delete **files** or **folders** from a disk. Once placed on the Trash icon, data is erased permanently

Virus: A nasty little program which is stored in the bootsector (see **Boot**) of a **disk** and does strange things to your ST (see **Ghost**, for instance). It's hidden, so you can't readily find it, and it runs when you boot from that disk. It lies in **memory** and can copy itself to other disks' bootsectors if not discovered and eradicated

Window: The work area that the ST uses to display **files** and **folders**. You may have up to four windows on the **Desktop** screen at once. Also the large glass object that stops your room being really dark all day

Write-Protect: To prevent a **disk** from being written to by the **disk drive**. Every floppy disk has a small tab in the corner: set it so that you can see through the hole in the disk. When it's in this position, no data (or **viruses**) can get onto the disk **stf**



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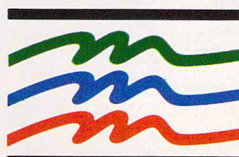
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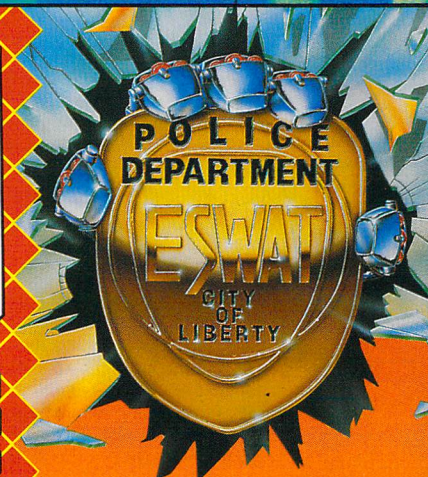
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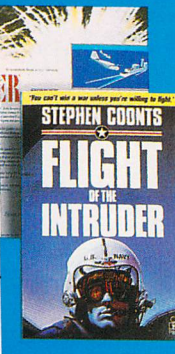
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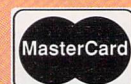
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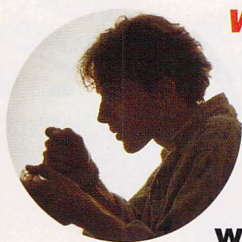
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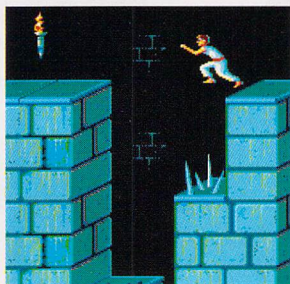
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WANTED: Mark "Deadeye" Higham (left) and the **FORMAT** gang, for **Monging Power without a licence, Marauding without due care and attention and Commanding Battle without a clue. Reward? You're joking!**

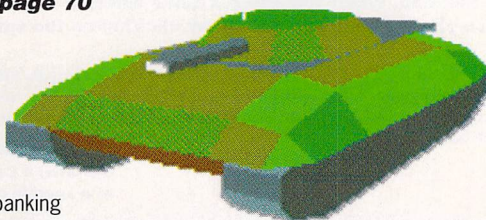
PRINCE OF PERSIA

Gob-smacking animation and absorbing puzzles abound in this Arabian **FORMAT** Gold winner **page 96**



POWERMONGER

Go on a mad Saddam-style rampage through towns and villages, subjugating people and elevating yourself to the position of divine leader **page 70**



ROBOCOP 2

After the original *Robocop* spent more than 80 weeks in the number one slot, Ocean are trying to repeat that success with this platform follow-up. Is this one worth dying for? **page 77**



THE STF RATINGS SYSTEM

GRAPHICS: A score out of ten for the quality of visuals and animation, including how big and colourful the sprites are, how smooth the scrolling is, and so on.

SOUNDTRACK: (out of ten) Sampled sounds are realistic and rate highly but ST sound chip noises tend to send your eardrums convulsing

INTELLIGENCE: (out of ten) How clever do you need to be to tackle the game? Puzzle and strategy games should be tough; few shoot-'em-ups are mentally taxing

INSTANT APPEAL: (out of ten) You take the game out of the box and drop it in the drive. How well does it draw you in? How easy is it to get into?

LONG TERM INTEREST: (out of ten) You've had the game for a couple of weeks. Is it covered in dust, in the bin or still in your disk drive?

OVERALL: (a percentage) Terrific graphics and wonderful sound make a game look hot, but they don't make it great. The overall score comes after joint discussion between the **FORMAT** reviewers and depends on the quality of the gameplay and its long-term appeal

● It is **FORMAT** policy to review only finished games – the games you could buy – never incomplete or demo versions

ENCHANTED LANDS

Snuffly, cuddly animals rear their colourful heads in this brand new cutesy game from Germany **page 75**

ESWAT

ST FORMAT takes its life in its hands and joins up with the Cyber Police. We pull no punches and tell it like it is **page 99**

HORROR ZOMBIES

Yeeowww! Step inside a haunted mansion and watch your most violent nightmares transform into hideous reality **page 84**

JUDGE DREDD

The honest policeman has been transformed into a judge to keep crime to a minimum in Mega City One. Even up the score by turning the city into a bloodbath **page 100**



LINE OF FIRE

Terrorists have captured a Rapier machine gun. Can you get it back again without being blasted into infinity? **page 90**

MATRIX MARAUDERS

Bloodthirsty, futuristic sports games are in vogue and this is one of the bloodiest. Strap yourself in, grip that accelerator and prepare for a full body transplant **page 79**

MYSTICAL

Don your dirty trenchcoat, get out your magic wand, flash it about to cast spells and zap the baddies. Paul Daniels, watch out! **page 93**

STUN RUNNER

Put your foot to the floor and charge through tunnels in this futuristic race-'em-and-chuck-up game **page 79**

WELLTRIS

The Russian programmer responsible for the hugely addictive *Tetris* has turned his idea into 3D. It's almost guaranteed to give you tunnel vision **page 95**

TEENAGE MUTANT HERO TURTLES

Cowa-bleedin'-bunga! Those pizza-loving, vomit-inducing reptiles are here! **page 88**



powermonger

ELECTRONIC ARTS £29.99



God games like *Supremacy*, *Millennium 2.2*, *UMS 2*, *Populous* and *Sim City* are hypnotically compulsive. None of them, though, had as much to live up to as *Powermonger*. It's the latest game from the Bullfrogs, the programmers who created *Populous*, which was deservedly one of the biggest-selling ST games of all time. But although this is a God game played on an isometric 3D landscape, that's where any similarity to *Populous* reaches an abrupt end.

Your ambition in *Powermonger* is to conquer a staggering 195 territories – but you handle each of them individually, so in any single game the objective is to win just one territory. You can then save your position to disk with the save-game option, coming back later to tackle more.

An overview map in the top left of the screen shows the entire terri-

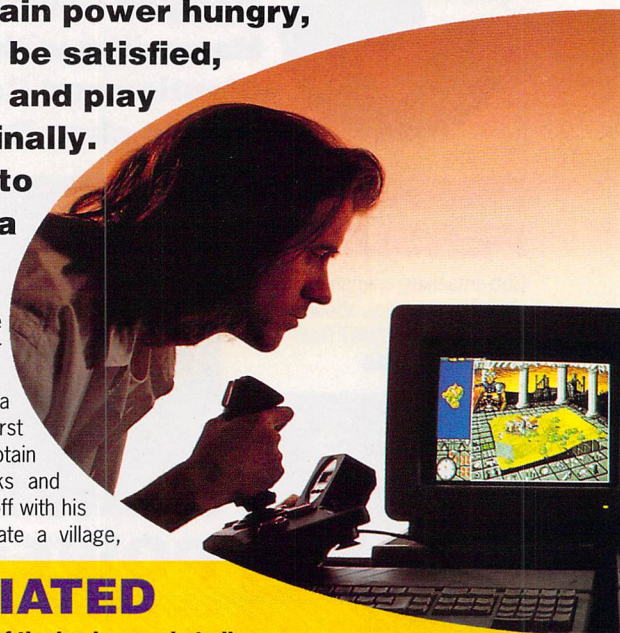
If you're the sort who longs for a starring role in the Gulf War, or have a ghoulish fascination with dead bodies, or you're just plain power hungry, then your needs are about to be satisfied, sicko. Forget all the rumours and play *Powermonger* for yourself – finally.

Mark Higham discovers how to subjugate villages and bring a nation under your command

tory you're playing on, while a detailed close-up map reveals a small section of it in impressive 3D. You can use this to zoom in on individual characters, settlements and battles. By clicking on four icons at the top of the screen you can spotlight settlements, people, roads and contours on the overview map to

help plan where to direct your campaign.

To initiate a move you first select a Captain from your ranks and then send him off with his men to subjugate a village,



WAR: A GUIDE FOR THE UNINITIATED

That expanse of space in the centre of the screen is devoted to displaying a detail of the landscape, but all your decisions are made by clicking on the icons round the map. When you make a move where a location must be specified (as in the case of Attack, Trade and Invent), you choose your destination by clicking on the small overview map

POSTURE Click on one, two or three swords to determine your aggression level. The "Posture" setting affects all sorts of things in the game. On a high aggression level you find it very hard to strike an alliance with someone but you are able to kill many more villagers in an attack. You can set Captains up so they each have different posture settings

DISK OPTIONS Besides loading and saving the game, this icon also gives you the opportunity to switch to multi-play

SPY This enables you to send out a spy to infiltrate your enemies' village and bring back useful information

ALLIANCE This icon gives you the chance to form an alliance with a village held by the opposition

TRADE Provided you haven't fought a village previously, you can offer to trade with it. You may pick up weapons or food, depending on the village's surplus stock

QUERY Click anywhere on the main map with this icon highlighted and you receive additional details. This is useful for discovering the strength of a village before you attack it

GO HOME If a battle gets too tough you can withdraw by clicking here. Your Captain returns to his home village with all his men

GET FOOD Instructs your army to visit a specified village and gather any food you find. The amount you come back with depends on your Captain's "Posture" setting

SUPPLY FOOD Click here to dispatch a Captain to drop food at a specified location

DE-RANK This icon disbands a Captain's men. The number disbanded depends on the Captain's posture setting

GET MEN Enables you to recruit men into your Captain's army

EQUIP INVENTION Once you've developed a weapon you can give it to your men, improving their fighting abilities

SEND CAPTAIN Move your Captain around the map with this icon and all his men follow

INVENT Provided you have a workshop in your villages, you can build or develop new weapons

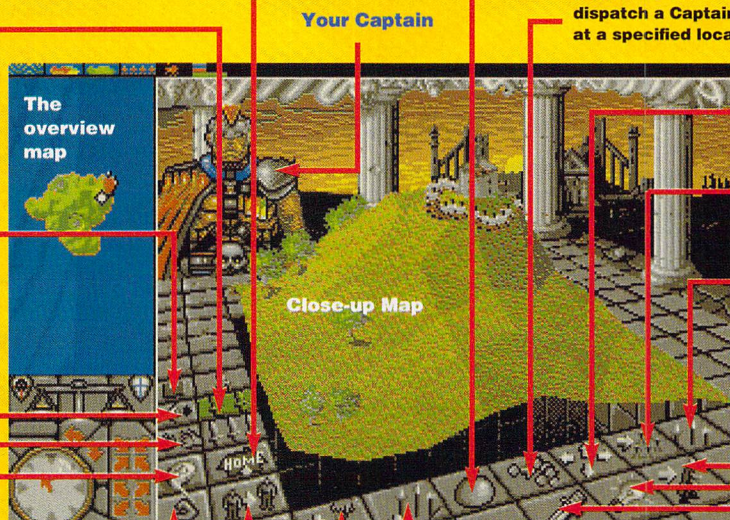
ATTACK Send your men out to take over a new village. Villages with a workshop are the best to attack, since you can then begin to develop your own weapons

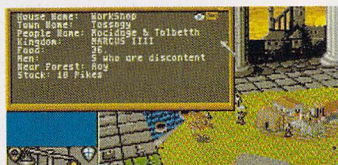
TRANSFER MEN In serious and lengthy games you can accumulate up to four Captains. This icon enables you to transfer men from one Captain to another. The number of men transferred also depends on your posture setting

DROP INVENTION Enables you to leave an invention with another village

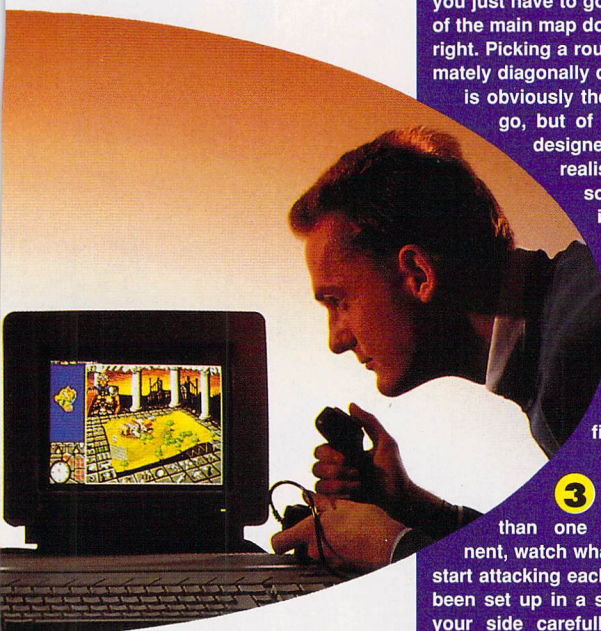
DROP FOOD Enables you to drop a cache of food so you can pick it up later. The amount of food you drop is determined by your Captain's aggression level

Click on the different icons to highlight landmarks on the overview map (top left)





■ Using the Query icon, you can call up details about any area of the landscape. Here, you have clicked on a workshop and you're duly informed that the people are developing pikes



■ Use a datalink to connect two STs together and you can play *Powermonger* against a friend. Build up an effective arsenal of weapons and try to wipe him off the island before he turns on you. Don't get the wrong idea: this isn't war, it's just a game – a sweaty, bloody and enthralling game

trade or form an alliance. At the start of a game you have only one Captain but you can accumulate more as you press forward.

In the first territory all you have to do to win is race round the island and attack every settlement you can lay your sword to before your obedient serfs starve to death. To attack, you select the Attack icon and then highlight the settlement you want to target. Your men race off to it and begin to attack. If it's equipped with superior weapons you're likely to fail – and in this case small angels rise from the battlefield as your men are sliced to death. If you succeed in defeating the village, your men gather in a circle around your Captain until you decide what audacious move to make next.

Usually you wouldn't charge short-sightedly into battle. Instead you first check how far the village tribe have advanced and how many people live in the village. You may

STRAIGHT FROM THE PROGRAMMER'S MOUTH

To get you off on the right track, *FORMAT* went to programming team Bullfrog's head honcho, Peter Molyneux, to get you his Top Ten Tips for advancing through the early stages of the game.

Take it away, Peter...

1 You don't have to conquer all 195 territories to win the game: you just have to go from the top left of the main map down to the bottom right. Picking a route going approximately diagonally down the big map is obviously the shortest way to go, but of course when we designed the worlds we realised this and put some real toughies in your way.

2 If you do happen to meet a particularly tough land, consider going around this territory to find an easier one.

3 If you start a territory with more than one computer opponent, watch what they do. If they start attacking each other they have been set up in a state of war. Pick your side carefully and make an alliance with the better side (by clicking on the Hands icon on the left side and then selecting one of his villages). This enables you to use all of his resources, such as food and equipment. Be careful if you break the alliance, though, since he'll then tend to pick your villages to attack. Also, he has the capacity to break the alliance as well, so don't trust him too much.

4 When you first start into a territory, check how many men are under your command. Click on some of these troops to see if they are using any weapons.

5 Beware whenever you attack towns which have been inventing weapons. The people from these towns try to pick up the weapons from their workshop before engaging you in battle.

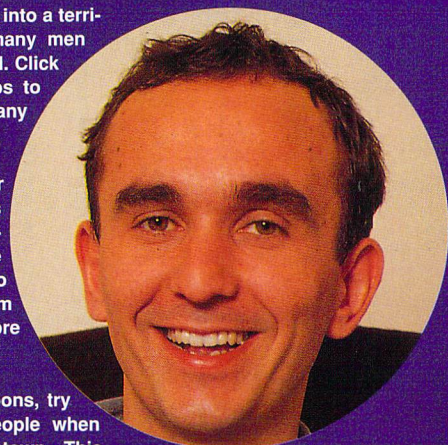
6 If a town has weapons, try to ambush the people when they are far from the town. This stops them picking up the weapons.

7 Sometimes it is worth inventing rather than attacking. Bear in mind that a person equipped with a pike can kill as many as two people holding nothing, and someone equipped with a sword can kill up to three people holding nothing. A bow means the person holding it can kill from a distance, and cannons or catapults are deadly.

8 If you have invented bows, it's a good idea to have an army equipped half with bows and half with other weapons.

9 Bear in mind that a character's strength in hand to hand combat depends on his age and how much he likes you. This also applies to the power of bowmen.

10 It takes a very long time to produce a cannon or catapult – but if the town that's in the process of making it is defeated, the stage that the cannon was at is saved, so



■ Bullfrog's main man, Peter Molyneux, gives his own advice for getting to grips with *Powermonger*

the victor has less time to wait for the finished weapon.

Thanks, Peter. A round of applause for Peter, ladies and gentle—

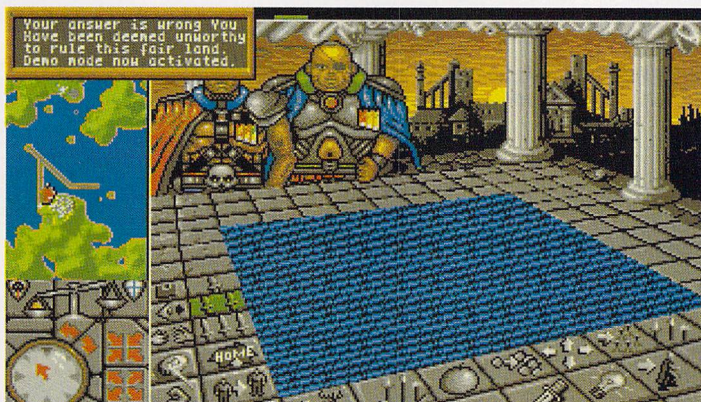
11 Don't be afraid to run away from a battle if things start looking bad for you.

12 Never let your king wander around with less than four men – he is often picked on and killed by unfriendly villages.

13 It's a good idea to try and get at least one town with a workshop early on in the game.

At this point we decided to switch on our tape-recorder and leave Peter sitting on a rock, staring into the sunset, reeling out tips to *Powermonger*. Watch for more in future issues of *ST FORMAT*!

*“This is one of the most absorbing games around, in the same league as *Supremacy* and *Millennium 2.2*”*



■ With two Captains, you can proceed much more quickly, ravaging the lands and subjugating the people twice as fast

a bow or cannon can fire on you from a great distance and pikes can easily kill two people with one blow.

Instead of attacking a village armed with this kind of technology, it's in your interests to form an alliance instead. By joining forces with another Captain you increase your attacking ability and proceed twice as quickly around the map. You can leave one Captain and his men to develop weapons and another to attack or recruit other villages.

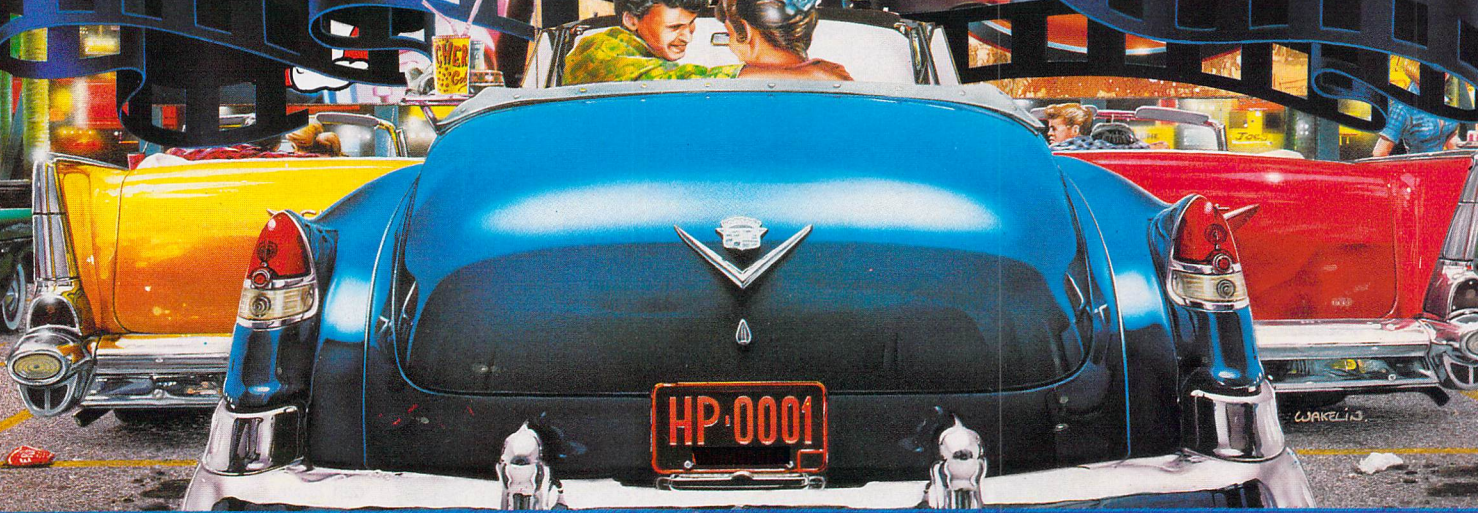
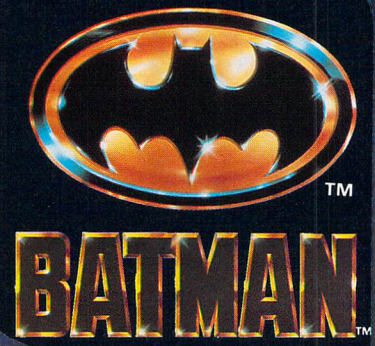
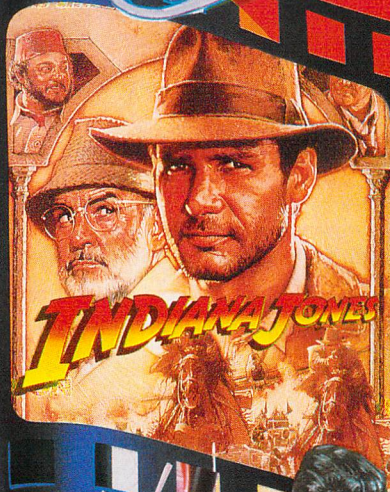
It's wise to spend time inventing your own weapons. The more time you give villages to develop a weapon, the better the object they come up with. But you have to remember that all the time weapons are being developed in your villages, they're being invented in the villages belonging to your enemy as well.

A pair of scales at the bottom left of the screen indicate your progress. When the scales have tipped in your favour you can retire

THE COMPILATION PACK OF MEGA STARS

HOLLYWOOD

Collection

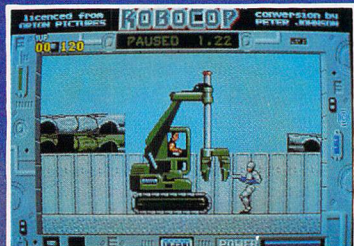


ROBOCOP

GHOSTBUSTERS II

INDIANA JONES

BATMAN



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TWICE THE THRILL

The Bullfrogs have always been fascinated by the idea of multi-player games – and who can blame them? The idea of playing against a friend rather than a computer opponent is enough to make your hands sweat in anticipation. In *Powermonger* there are two forms of multi-player mode available, and both demand that each player competes on a separate ST. You can connect the two machines using either a data or modem link. To connect the machines using a datalink, you need to buy yourself an RS232 lead (just £10.95 from Lightwave, ☎ 051 639 5050). This method demands that both STs be in the same room. The alternative, a modem link, requires both players to own their own modems. This is more costly but the connection between the STs is then made across the telephone line, enabling you to play either against your mate next door or your Swedish pen-friend.

When in multi-player mode both players choose their side from any of four tribes. The view shown on your ST is identical to that in a single-player game, but when you raid a village it belongs to your friend and not an invisible opponent. For more of a challenge, you can opt to switch on up to two computer opponents who also play on the same map. You then need to defeat his villages as well as those belonging to your mate if you want to win *Powermonger*.

from the fight. You're then informed that you've won the island and you're returned to the main map where you can select the next adjacent territory to attack.

In the more advanced games you can have as many as four computer opponents all competing for prime spots on the territory. They often develop weapons judiciously and then attack with prime accuracy. You don't win the game by being nasty but by caring for your people's needs. You must keep them supplied with food and be sure to attempt alliances and trade, not just whip out your sword and go on a bloodthirsty search for flesh.

EFFECTS

This is no simple re-hash of *Populous*. Although the isometric 3D playing area looks similar, the landscape has so much extra detail that it's radically different. Villages comprise taverns, workshops and barns, with smoke effectively pouring out of the occasional chimney. Every character in the game is represented by a small graphic and even has its own name. Using a Query icon you can click on each character and display

his name and profession. There are even sheep roaming the fields and birds flying through the trees.

Complicating your viewpoint and affecting your villages' ability to produce food are regular falls of rain and snow. When the snow falls on the landscape, everywhere pales gradually into white.

Sound effects are equally comprehensive, and for once they aren't limited to a handful of spot indeterminate grunts. Instead, you're treated to the sampled sounds of sheep baaing, birds singing and men going to work in villages. This adds a whole dimension to the gameplay: if you merely overhear the men in enemy villages working you may want to go there and put a stop to their ambitious designs.

VERDICT

Each year there are a tiny handful of games which look like something really special – the ultimate game? Although *Powermonger* is a technically better game than *Populous*, however, it doesn't have the same immediate appeal, and this is going to prove off-putting – particularly to people who've just bought their ST and are new to strategy-war games.

Sadly, what lets *Powermonger* down most is its 44-page manual. It adequately explains how each icon can be used and how to utilise the different options to your own advantage, but unlike comparable manuals such as *Supremacy's* and *Imperium's*, it lacks a walk-through of the first few minutes of play. Instead, you're tossed into the action and left mercilessly to your own devices to work out by trial and error the best way to win a campaign. Thus, the first time you pick up *Powermonger* you're not sure whether you should concentrate on inventing new weapons or just stick to your sword and dart round the island using it on every poor little homestead you can reach.

Nevertheless, once you've finally worked out how to proceed this is one of the most absorbing games around, in the same league as *Supremacy* and *Millennium 2.2*. With astonishing attention to detail and an engrossing range of options at your fingertips, you just can't stop conquering villages.

MARK HIGHAM

GRAPHICS	9
SOUNDTRACK	9
INTELLIGENCE	7
INSTANT APPEAL	7
LONG TERM INTEREST	9
OVERALL	93%

INTO THE POWERMONGER DOMAIN



1 The conquest is about to start. At the beginning of a game you have just one Captain. All your men gather round, waiting for the command to go into battle

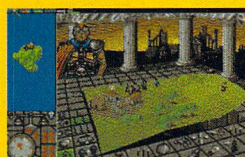


2 You examine the map and zoom in on a village. It might be worth attacking, but before you make a move check that the village has a workshop. You can invent weapons only in villages equipped with one

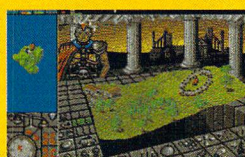
3 You've decided this village is yours, so send all your men off to battle



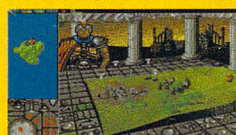
4 (below) They race through the countryside, rapidly reaching their destination. Note that the Captain doesn't venture into battle but stays behind and waits for the outcome



5 Time to get those swords moving and slice your opponents into pieces



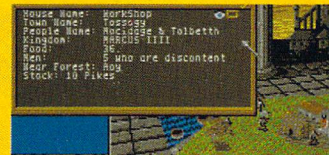
6 (right) The rising angels indicate casualties in your army. Though men have died, you've still been able to take over the village



7 After the fight your men circle round and wait for another command

8 (below) Send them out to develop weapons. Click on the workshop to see what's in progress

9 Now try and form an alliance with another village. This could be helpful to your campaign



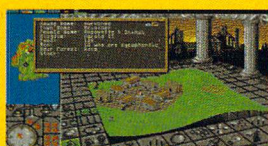
10 The alliance is accepted. You now have access to that tribe's settlements and resources



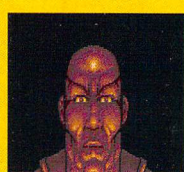
12 (right) Afraid of their skill, you go to war in the middle of winter – then watch as your people die off. But fortunately there are enough survivors to win you the village



11 You find another village which looks like it might be a promising target, so you send out a spy to gather information. When he returns you have full details of the stage of advancement of the village. Here you can see they're developing pikes



13 (right) Retire from the game, having won the first island. That was easy enough – but your opponents get more and more vicious from now on



14 The adjacent island. You look around to see if you find anything interesting



17 Dead already! These bad guys aren't stupid – you don't get much time to explore land and develop weapons



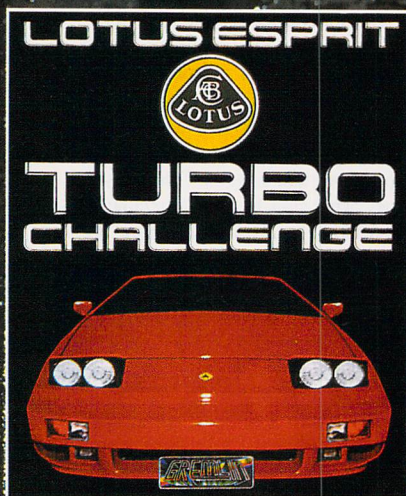
ONLY GREMLIN CAN DO THIS

LOTUS 94% C & VG, 94% Raze Rave, 90% ST Action Award, 90% Zero Hero, 88% Amiga Action Award.
TOYOTA C & VG Hit, Amiga Action Award, ST Action Award, More To Follow.
TEAM SUZUKI Prepare To Be Amazed

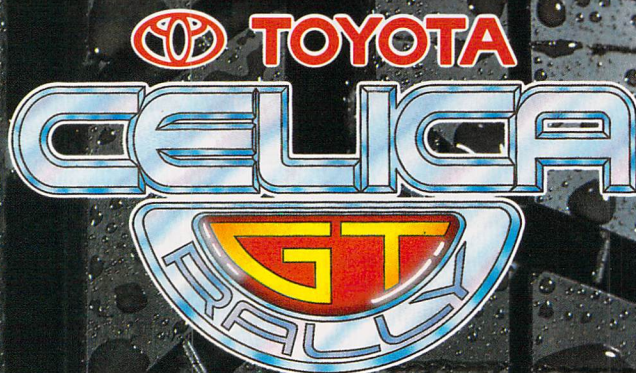
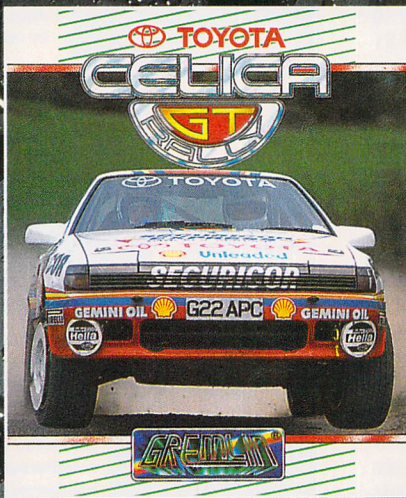


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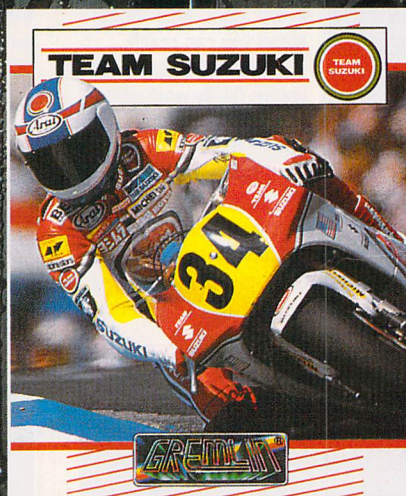
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exterminator



■ Watch out for that wasp! Owwww! Too late! Getting stung reduces your "juice count" or energy and draws the game nearer to a close

There are hideous creatures with antennae and more than a natural number of legs needing to be dealt with. The invasion must be stopped, and there's only one person suitable for the dirty job. It's not the ordinary alien attack from Planet X that we're talking about here. It's insects – and they've taken over the whole house.

Your day's work starts in a quiet and secluded cul-de-sac. Seven houses are infested by larger-than-life insects, animated household garbage and worse. You are a spooky disembodied hand hovering around the screen and must stomp, squash and splatter the creatures as they come toward you.

The variety of pests is staggering – over-large flies, toy tanks and killer tomatoes, to name but a few. If

they fly you have to catch them in your hand to kill them. If they don't, you can kill them by swatting them with a quick downward swipe.

As your kill ratio goes up, the floor tile directly below you changes colour. Fill up an entire strip with your colour and you're onto the next screen. Each house also has a bonus level where you can gain extra points with no harm to yourself.

In the first couple of houses, you must shoot rats as they scurry around the shelves of the scullery. There are plenty of others too – wasps hover enticingly near with their stingers out and bombs threaten to blow your fingers off. You've got more than dishpan hands to worry about here: allow them to be hit too often and it's curtains.

EFFECTS

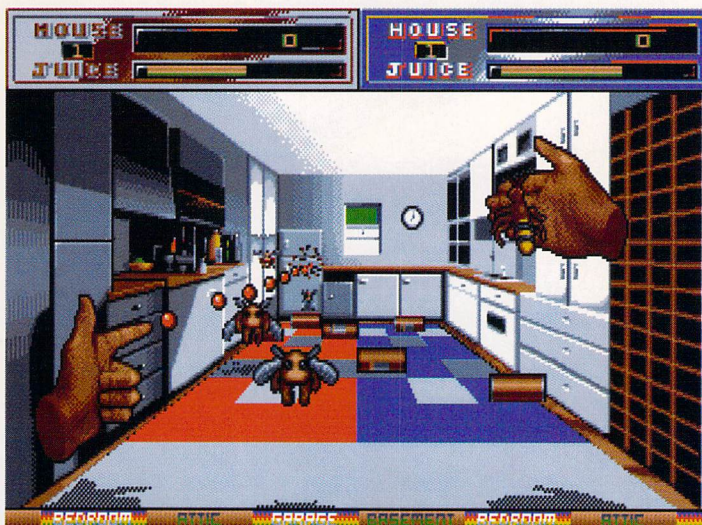
The interior design of the houses is well done, but they're just back-grounds – pretty pictures against which you engage the enemy. They don't actually affect the gameplay at all. Movement of the disembodied hand, your playing sprite, is fluid and lifelike – but the creatures are so cute it seems a shame to kill them. Their tiny forms fall lifeless to the floor and lie there, stuck to the carpet by their own oozing guts. (Sob!)

Plenty of squelchy and splatty sounds accompany your death-dealing blows. There's also an up-tempo tune which adds a sense of urgency to your thankless task.

VERDICT

Exterminator must be one of the most original arcade games! It's easy enough to get to grips with the controls straightaway, but the gameplay is challenging enough to keep you coming back for more. The two player mode – where two of you play left and right hands – adds another dimension. It has all the classic arcade elements which make a game stand out from the crowd. While you may not play it for hours on end, you'll feel the urge to come back often enough.

ADAM WARING



■ If you can't stand the heat, get out of the kitchen. The red player zaps some creatures from afar, while blue is hassled by that wasp

GRAPHICS	8
SOUNDTRACK	7
INTELLIGENCE	8
INSTANT APPEAL	9
LONG TERM INTEREST	8
OVERALL	87%

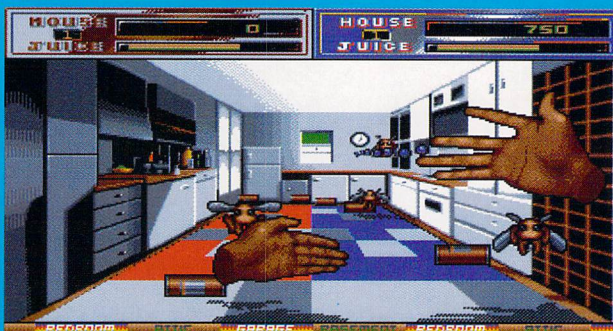
BUGS? YOU CAN SQUISH 'EM, SQUASH 'EM OR EVEN ZAP 'EM!

There's a staggering range of household menaces to be exterminated, but luckily you have several ingenious methods of dealing with them. All have been very cleverly implemented and fluidly animated – and all it takes is some logical moves of the joystick controls



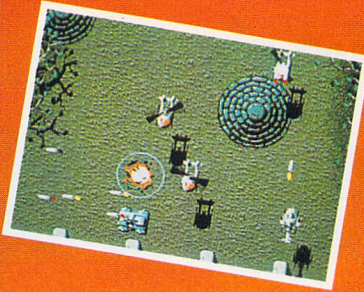
Grabbing You can crush flying monsters in your palm. Simply press Fire when the creature is directly in front of your grasp and it crumples up and falls to the floor

Pounding You can squash floor-bound enemies as flat as pancakes by bringing your clenched fist down sharply. If there's a nasty directly below you, it becomes just another sticky mess on the floorboards



Shooting You can destroy the blighters at a distance by zapping 'em. Pressing Fire while at the very edge of the screen shoots a stream of bullets from your index finger

From the programmers of Silkworm, the shoot 'em up of the eighties, comes SWIV, the shoot 'em up of the nineties.



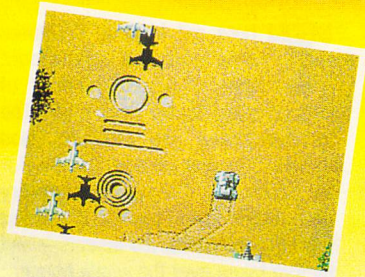
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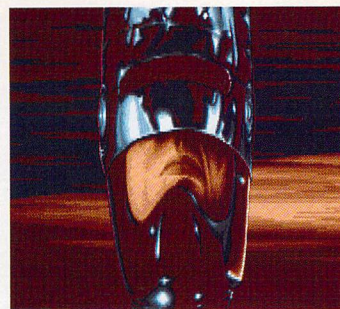
"Destined to be THE Shoot 'Em Up of the year." Amiga Computing November '90
"Superlative Shoot 'Em Up Stunna." Zero November '90

Screenshots shown are from the Amiga version.

■ **"Your move, creep." Robocop tries reasoning with the lift, the filing cabinet and the cupboard before realising that the perps are right behind him, giggling**

You've seen the film, bought the T-shirt, the video, the poster and the battery-operated rubber effigy, now it's time to play the game, again. Robocop is back, with a neat line in lethal response. His (your) mission is to penetrate a drugs network and arrest the laboratory technicians who've created the highly addictive drug, Nuke. You must ensure that Robo doesn't inadvertently pop these guys off in a battle-frenzy, since you need the arrest points for later. Everyone else is dead meat – apart from one leather-clad, laser-toting female who also needs the long, strong arm of the law to get her to see reason.

So off you trot, breaking boxes open, riding lifts



■ **"Think it over, creep. Don't eat between meals, don't smoke, don't drink and never, ever do anything perverse with dumb animals." – From Mr Rob O'Cop's Annual Lecture for Wayward Boys and Girls**

robocop 2

OCEAN

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and floating on hover-platforms in your search for Nuke, extra weaponry and the secret of eternal happiness. Clear out the drugs base and you move on to mental dexterity puzzles which could help you regain some of Robo's pre-cyborg humanity.

Then after a test on the firing range you get to meet Cain, the evil drug baron. He's holed up in his hide-away at the Tokogawa Brewery, where you must avoid the temptation to organise a proverbial and defeat him instead.

However, that's not the end for Cain. He returns as the drug-crazed OCP robot and he's not a happy man – er, cyborg. During a demonstration of his abilities at the Civic Centrum,

some unfortunate fool waves a canister of Nuke around and Cain starts going cold turkey. Robo emerges for the final showdown and it's all down to you from there.

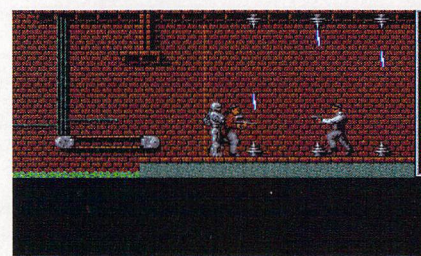
EFFECTS

The first thing you notice on the graphical front is the smoothness of Robo's animation. He may not be the most controllable sprite in the world (he has a tendency to refuse to jump where you want him to), but he's certainly among the slickest. Other incidental animation is crisp and clear, well-defined against a detailed back-

drop which helps you to spot dangers early. No aciieed-house, eye-confusing colour schemes here – it's all first-rate arcade clarity.

The sound effects are a bit twee, though. They add nothing to the atmosphere and merely inform you that you've been hit or you've hit something else.

However, the music is (for a chip-tune) quite remarkable. It took an astonishing 24 hours of continuous play before I finally cracked and had to kill the sound. That's a sure sign of a (relatively)



■ **Tin legs and iron hands are useless when energy bolts fall from the ceiling. Feel the surge of power all the way down to your reinforced steel jockstrap**

pleasant intro tune. Ennio Morricone would be proud of it.

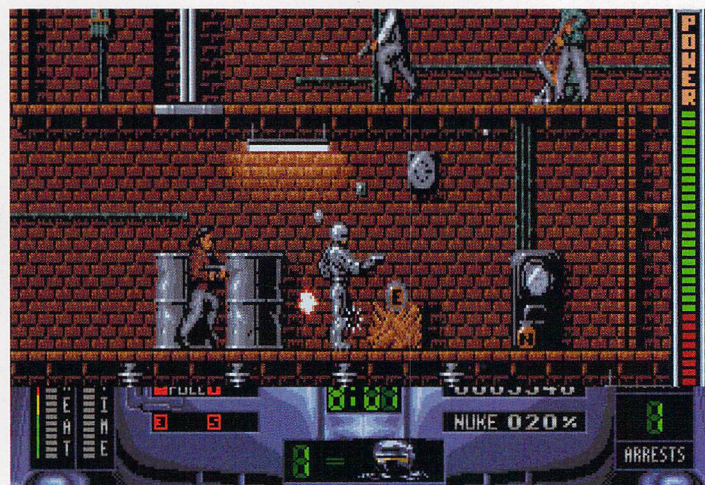
VERDICT

Robocop 2 is tough – tougher than is perhaps necessary, but not unbeatable. Too high a level of difficulty on the first stage makes it frustrating but not unattractive: the desire to continue and win through surpasses the desire to switch off and do something easier – and that's the mark of a good game. Buy it and you'll be swearing, throwing the joystick around, missing your tea and staying up into the night. But you'll love every minute of it. Your move, creep.

NEIL JACKSON



■ **"No-one gets dinner unless he's washed his hands," says big Uncle Robo. "Mine are clean already," says lab technician Henry, about to lunch on lead**



■ **All together now: "E is for energy, pure and sweet. N is for Nuke, the poor junkie's treat." That's the trouble with prime directives. Everything's just so cut and dried...**

GRAPHICS	8
SOUNDTRACK	7
INTELLIGENCE	7
INSTANT APPEAL	8
LONG TERM INTEREST	7
OVERALL	84%

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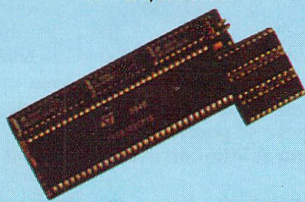
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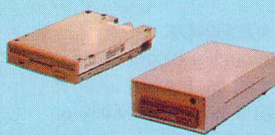
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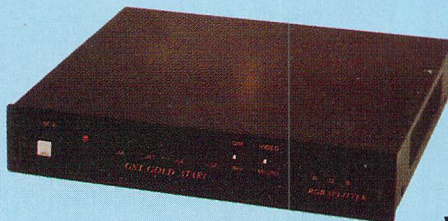
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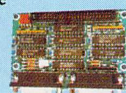


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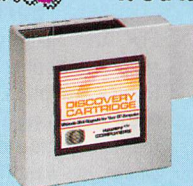
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STUN runner

DOMARK £24.99

Keen to acquire some ST owner's easily earned Crimble dosh, the software houses spent the latter half of last year whipping their programmers into a frenzy with Pro-Plus and incentive pay packets. Latest in the spate of arcade licences is this Domark conversion of the wickedly fast and frantic Tengen game.

STUN Runner is a futuristic racing game. You control a STUN ship (hence, no doubt the title) which you race down a series of twisting tunnels and race tracks. Other STUN runners are intent on stopping you from reaching your ultimate goal – the 24th level.



■ In the tunnels you've got to watch out for the other STUN runners. – That green blob ahead, by the way, is in fact the enemy, not a part of the wall

You control the ship entirely by using the joystick. Your speed varies according to the line you take on the wall of the tunnel, just like in a toboggan. Pressing Fire sends a laser beam down the tunnel and you can vary the height of the laser by pulling backwards or forwards on the joystick.

There are three skill levels to choose from.

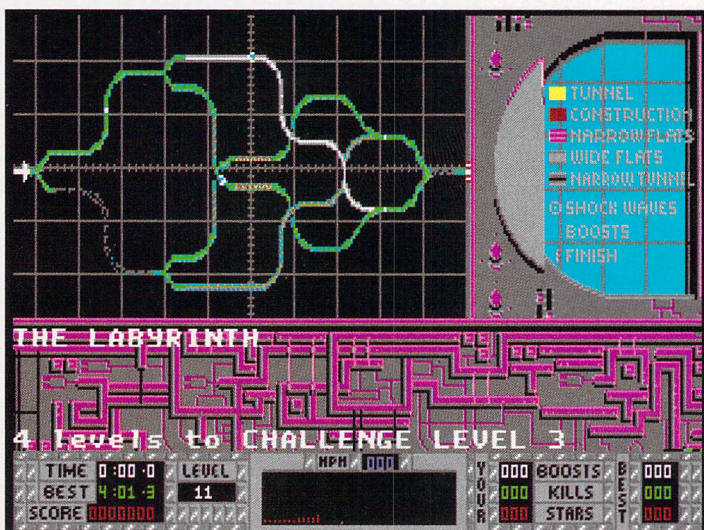
■ If you beat the clock and your opponents, you see the end of the level where you can collect your bonus

A beginner's level eases you into the game gently. A mid-range starting point takes you to the sixth level, while the hardest start, "The Labyrinth," throws you in at level 11.

The objectives on levels vary.



■ Chase the stars to find the optimum route through the tunnels. Avoid the car ahead or you lose energy (and Lucozade ain't going to help you either, never mind what that nice Daley Thompson says)



■ At the start of each level you're briefed on what to expect: chase the stars, jump the ramps or zap the enemy

Some require you to collect a series of objects, others to kill as many opponents as possible. Similarly, the track varies from twisting tunnels to winding race tracks.

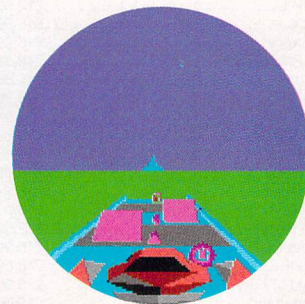
Stars appear down the track to indicate the optimum route for speed. Occasionally a turbo-boost pad appears. Running over this sends you to lightspeed: you go so fast that you can travel straight through solid objects.

Enemy STUN runners cruise the tunnels thick and fast, seeking to slow you down. The Train slowly trav-

els along the bottom of the tunnel, Mag Cycles brake suddenly in front of you and Armoured Drones get in the way since they're unaffected by your laser fire. Flyers drop bombs or missiles onto the track and destroying them gives you a hearty bonus.

EFFECTS

Initially STUN Runner looks excellent. A nice series of intro screens leads up to the start of the level. But the chronic animation hits you at once. The best aspect of the arcade game was its superb speed, completely lacking in the ST conversion. A series of dowdy frames limps past you with all the speed of a Ford worker between tea-breaks (not necessarily the views of the management – *The Management*). The laser looks incredibly crap: two small



■ Out of the tunnels on the race track you encounter loads of STUN runners and some ramps to send you flying into the air, so hold onto that lunch, Ralph!

green lines poke out of your ship and don't even wriggle about or anything. Sound is dire: blips worse than a Casio watch.

VERDICT

This could have been a wicked game. If the programmers had sacrificed the solid tunnels for a wire-frame format it would have been far better, although Tengen probably think otherwise. There's little to recommend this game, certainly not for £25. Nip down the arcade and play the original instead.

ANDY HUTCHINSON

GRAPHICS	5
SOUNDTRACK	2
INTELLIGENCE	3
INSTANT APPEAL	3
LONG TERM INTEREST	2
OVERALL	42%



■ Run over a turbo pad and you start travelling at lightspeed. This means you can travel through solid objects

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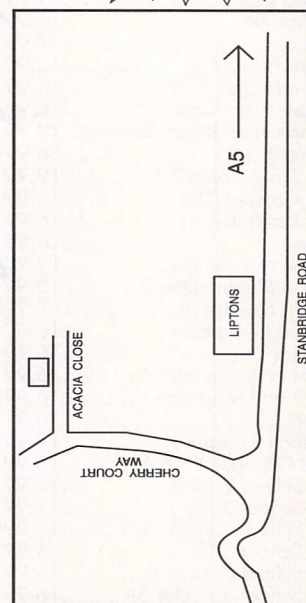
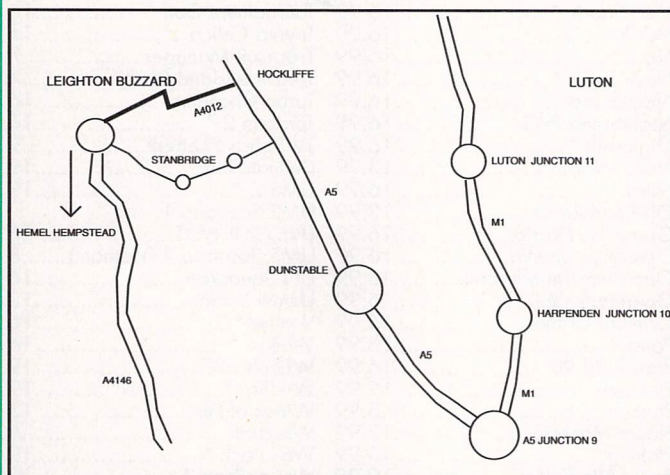
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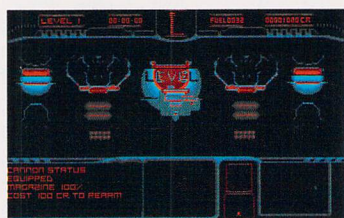
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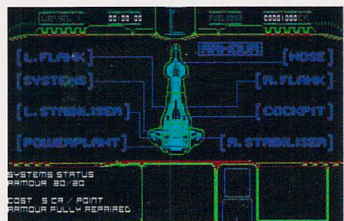
matrix marauders

All future sports seem to be bloodthirsty festivals rejoicing in death. In *Matrix Marauders* motor sport has turned into a game of kamikaze piloting. You are a pilot on the matrix and you must be Number One or else spattered on the track. You control a futuristic space craft which can be fitted with a lethal array of weaponry. To make things difficult your opponents have access to exactly the same kind of hardware.

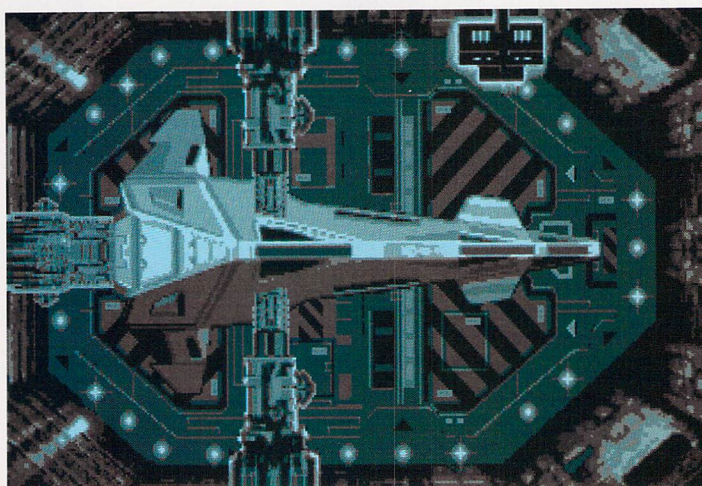


■ **Soup up your spaceship and survive the Matrix. Remember, it's your choice of weaponry that makes the difference between victory and body transplants**

You control your craft with mouse and joystick. The joystick controls the speed and direction of the craft, while the mouse moves your head and either changes or



■ **"Oooo, I don't know, mate. Looks like your main neutron baffle chamber's discharging the wrong number of bleepons into the catalyst oscillator. Very expensive job this, two weeks to complete at least and my partner's on holiday. Tell you what, though: I could rush it for you for another 250 credits..."**



■ **Ready for action – the computers are ready and you're all tanked up but all you can think of is if you've left the oven on back at home**

fires a weapon. The racecourse is in the form of a grid arranged in a series of a straights and shapes. Speed-ups and extra energy lie around the built-up areas of track.

If opponents get in your way you can hang a hard corner and hope to cut them off or you can lock weapons and then unleash a missile up – oh, say their sub-system cooling network. Some weapons, the Smart Gun for instance, lock on to targets automatically, while others require a bit of gun toting expertise to be effective.

Additional weaponry costs money and you've only got 1,000 credits initially. You earn money while on the Matrix itself – but since the

most expensive weapon costs 8,000 credits, you'd be wise not to expect too much on your first race.

There's no second place so if you lose a race you die. If you get so good that the computer holds no challenge for you any more, then simply plug in a null modem cable and attach it to another ST to play head to head with a friend.

EFFECTS

Marauders has the high quality of graphic presentation you'd expect from Psygnosis games. The ship ordnance and repair screens look futuristic and believable. There are innumerable clever touches like the lift sequence which places you on the matrix itself, though the graphics throughout the race are only ade-



■ **"And it's all gone terribly wrong for this plucky youngster from Earth. One wrong move and he's become yet another statistic in the Matrix hall of death-fame – it's a long list..."**

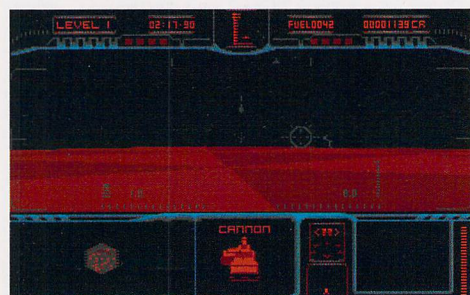
quate. The other spacecraft are solid 3D and all move fluidly. Weapons look good as they're fired and scrolling is seamless. The sound however is a bit of disappointment: where are those chunky samples?

VERDICT

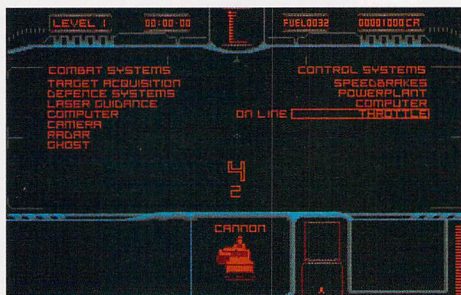
Matrix Marauders is a competent and interesting racing game with some clever twists, though unnecessarily "techie" – beginners should beware. Graphics are of a high quality and the animation is fast and smooth. The serial lead option enabling you to play a human opponent is a nice touch and the game probably plays a lot better this way. However, for all its nice touches, *Marauders* remains a fairly ordinary racing game.

ANDY HUTCHINSON

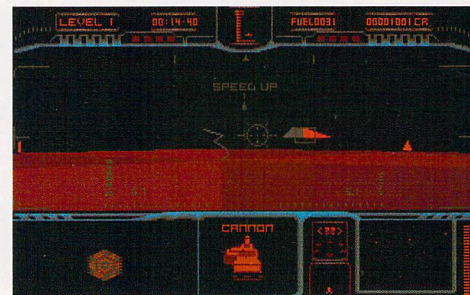
GRAPHICS	8
SOUNDTRACK	7
INTELLIGENCE	7
INSTANT APPEAL	7
LONG TERM INTEREST	7
OVERALL	73%



■ **The race is on and you've already been hit. The backup systems have kicked in, but your power is very low. It's only a matter of time...**



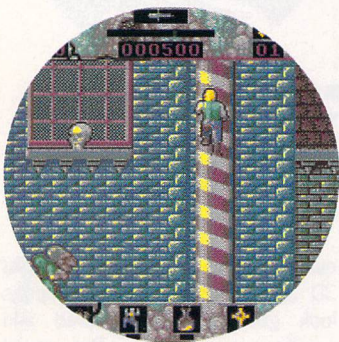
■ **Let the computers take the strain. Once the system's configured you can stay alive long enough to cash in your premium bond**



■ **Let the weapons target themselves – that chap over to the right wishes he'd eaten just a tiny bit more Ready Brek this morning**

Sounds like the title of some tacky, gruesome drive-in movie, doesn't it? Possibly one too awful even for Vincent Price. But in fact *Horror Zombies* is an exploration game similar in style to UBI Soft's *Night Hunter*. You play the role of one Count Valdemar, who drops in on the country retreat of Gory Manor. You must explore an entire six levels to complete the game and return to normal life.

As you wander round the Manor you have to find your way past zombies, shrouded spectres and even the occasional vampire. You can shoot many of the ugly monsters in your path but some are invulnerable and you have to find other ways



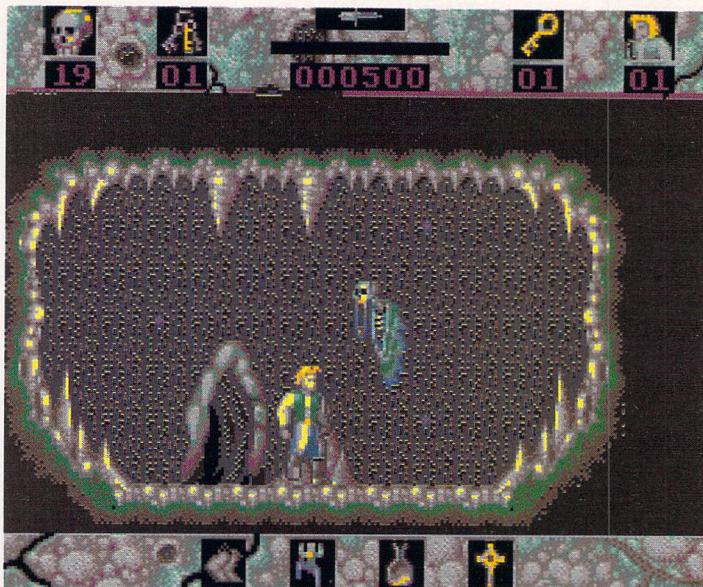
■ **It's not just getting past the monsters: you must pick up all the skulls in a level before you can think about finding the exit**

past them. Fortunately, you can climb ladders in the background or leap onto the occasional platform. The Count can also interact with the backgrounds – moving trolleys around to climb platforms or shifting objects to fool the monsters.

Throughout the action there are heaps of bonus items to collect – like keys to unlock doors, boots to sneak past monsters or weaponry to fend off attack – and you must pick up all the skulls in a given level to advance onto the next.

EFFECTS

The six levels span 600 screens. The first is inside the Manor with its backdrops of patterned wallpaper



■ (In thick Bela Lugosi accent:) "Welcome to Go-o-ory Manor. Eye-a hope you can stay for dinner. Hahaha (etc)." If you manage to stay off the menu and get as far as this third level screen, you meet a hideous wolf too. Only another 599 screens to search for a way out!

MILLENNIUM £24.99

horror zombies from the crypt

and ostentatious furniture. Other levels take you into a nearby village, off to a hidden cave and into the crypt. The backdrops are hugely detailed and there are many platforms and ladders to leap onto or climb.

The playing sprites are clearly animated and effectively leap around the levels. You can even get your hero to tip-toe past some of the more ferocious enemies to escape attack. The graphics are generally excellent, although some routines – particularly climbing ladders and walking down stairs – look dubious.

The sound effects are brilliant. Sampled spot noises and a clear intro tune set the 1950's B-movie tone superbly.

VERDICT

The adventure and arcade mix in *Horror Zombies* is either its making or breaking point, depending on which side of the fence you sit: if you're a devout shoot-'em-up fan, then the adventure/exploration side of the game is going to put you off, and vice versa. However, if you like a good joystick blast before you go to work and then a strategy to relax with in the evening, you could easily find a spot for *Horror Zombies*.

The problems confronting you are enormously entertaining. It's occasionally tricky lining yourself up to make a precise jump across a platform or finding a way past some of the invincible aliens, but that's what gives the game its wonderful appeal. The game would have benefitted from having still more interaction with objects, but this is only a tiny complaint. A great idea, cleverly executed and with enough collectable bonuses to keep you playing for hours on end.

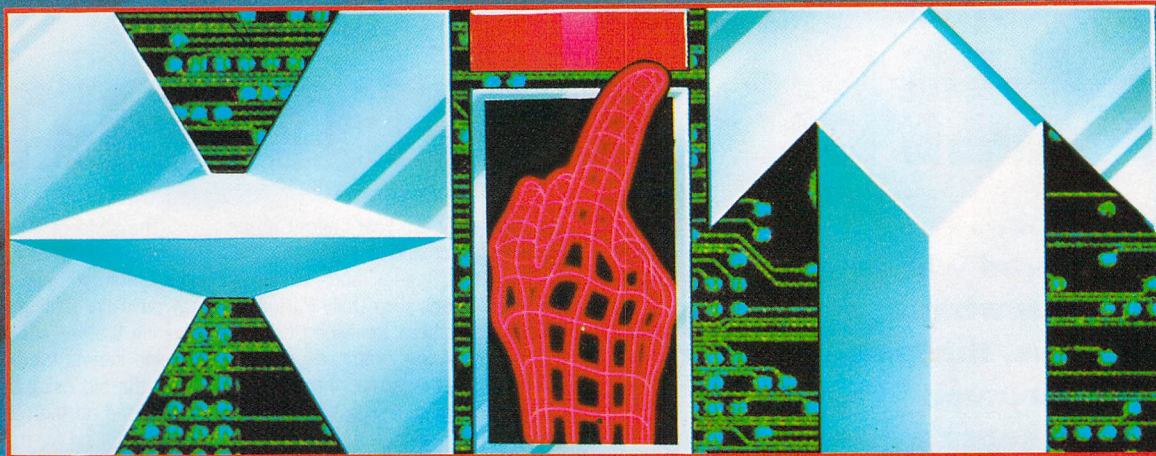
MARK HIGHAM

GRAPHICS	8
SOUNDTRACK	7
INTELLIGENCE	3
INSTANT APPEAL	7
LONG TERM INTEREST	8
OVERALL	74%

THE HOUSE IS A MUSEUM, AND THEY REALLY ARE A SCREE-AM

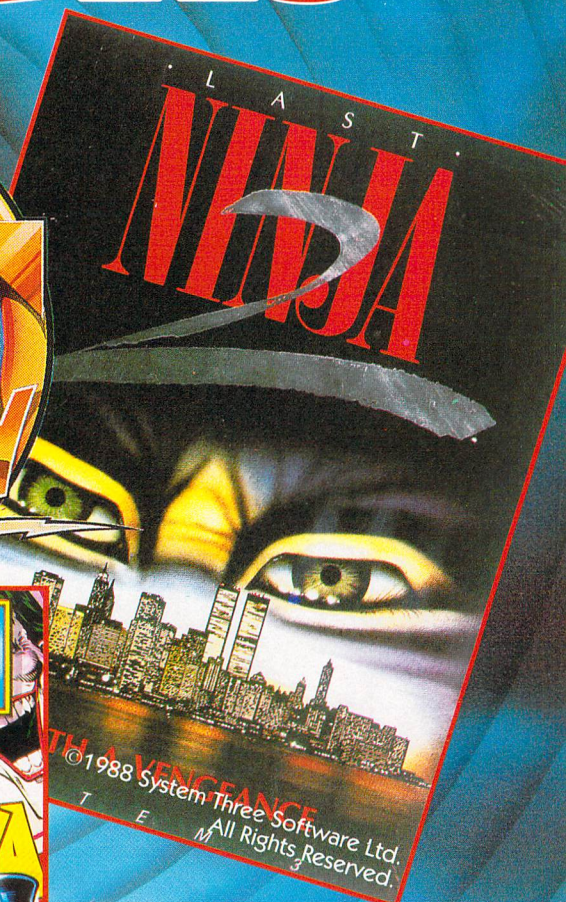
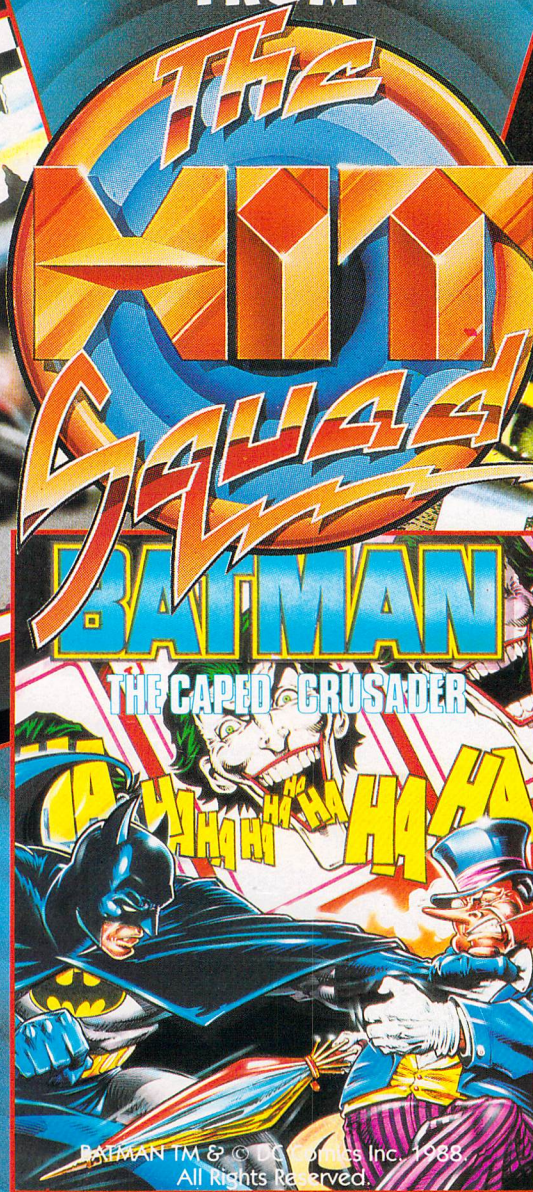
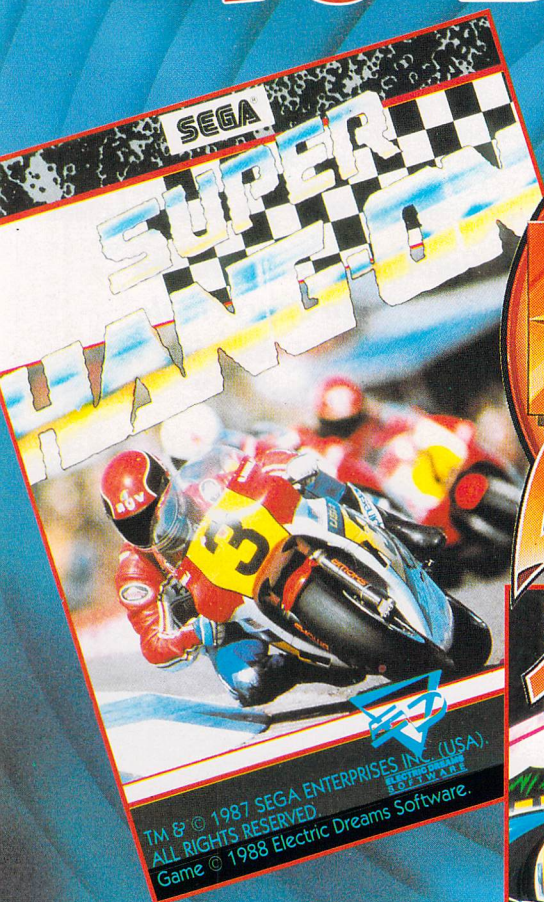


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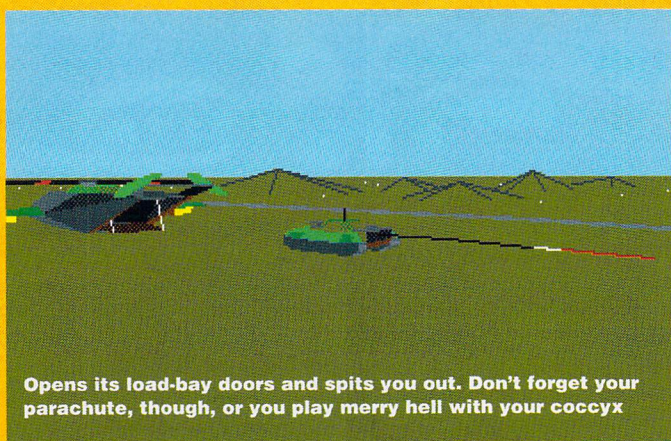
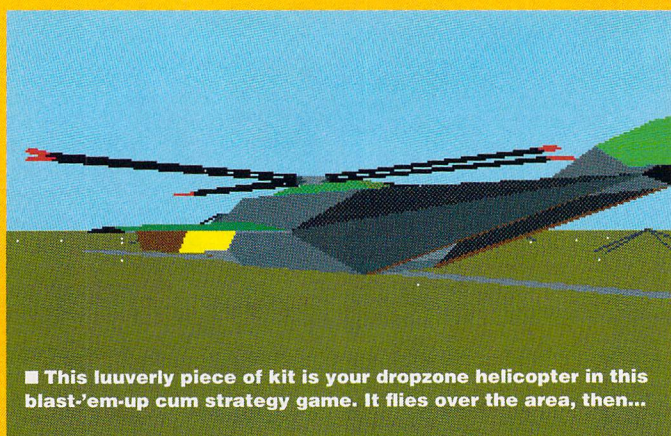
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battle command

Listen up, chaps.

Johnny's declared war on us, so you know what that means. Yes, that's right, we get to muck about in some super whizzo blasting-mobiles and give the oiks a right royal bruising. Andy Hutchinson, you take the Mauler tank. The rest of us are right behind you... in the bunker



Nearly two years ago, *Carrier Command* burst onto the ST scene and received more accolades than Dolly Parton at a cleavage contest. Realtime Designs, the programming team responsible for that mega game, have been locked in an attic slaving away on the sequel. The result is now finally ready for public

The style of the missions varies to suit all players. If strategy is your idea of fun, you can spend two hours sat on a hill waiting for a convoy. If blasting the hell out of an entire tank division seems more like it, you can strap the old rising sun to your forehead, load up the cannon and motor out looking for trouble.

Once you decide on a suitable mission you can check the briefing and map screens.

These show you your objectives and where exactly you've got

viewing and the main surprise is, your aircraft carrier's been traded in for a more economical vehicle – a tank.

Battle Command is a shoot-'em-up cum strategy game. You are in command of a small and nippy Mauler tank and your job is to complete a total of 12 missions. To do this you have to learn all about the weapons systems of your tank. You also need to know how to outfox the enemy – when to stay and fight and when to run and hide.

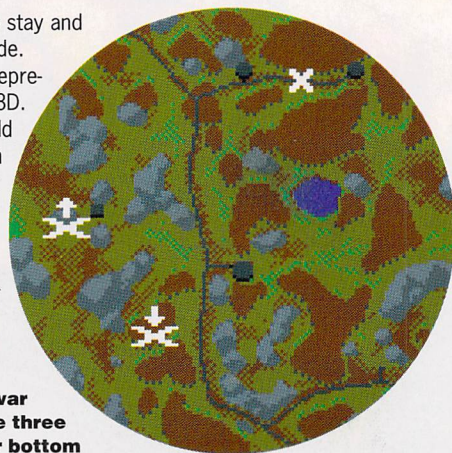
The game world is represented in solid, full colour 3D. Initially you see the world from inside your tank, with all the instrumentation at hand, but you aren't restricted to sitting at the wheel: you can also view the tank from any angle outside it.

■ Study the map screen carefully, because once you're dropped into the war zone you're likely to have three or four Banshees up your bottom

to get to and from. It's a very good idea to read them carefully, since you're likely to be under fire from the moment you're dropped into the war zone.

There are four weapons pods on the Mauler and these can be filled

"Animation is smooth and rapid, with no appreciable slowdown when there's a lot happening on-screen"



MAULER WEAPONS SYSTEMS

What's a shoot-'em-up without shooters? In *Battle Command* you get to choose from a tasty selection of seven offensive and four defensive systems



Pulveriser: every self-respecting tank needs a cannon. The Pulveriser fires a 120mm shell over a range of 3,300m with considerable force



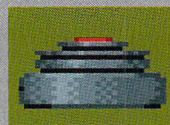
Phoenix: if the aeroplanes and helicopter start getting you down then fire a Phoenix surface-to-air missile up their bums. Same range as the Banshee



Banshee: knocking out ground targets is the purpose of this surface-to-surface missile. It has a range of 2,200m and is a "fire and forget" type



K-40: you'd better know about gravity and arc trajectories and that sort of stuff to make the most of this 100mm mortar unit. Maximum range is 750m



Sleeper: nothing like surprising the enemy to gain that tactical advantage. Leave this baby ticking away and it blows up everything within 200m

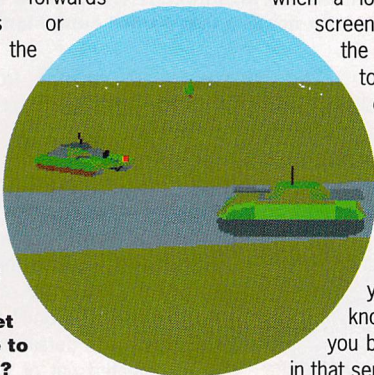
with either offensive or defensive weapons, in any combination according to your tastes. There are seven offensive weapons to choose from, varying from missiles to bombs. The defensive weapons come in four flavours, including the usual chaff and decoy flares.

When you're kitted out, a large helicopter drops you into the war

"Battle Command certainly comes up with the goods. It's got enough depth to keep even the most ardent game-player happy"

zone. You take control of the Mauler by clicking the right mouse button. Pressing the left button fires whichever weapon you have selected. Moving the mouse backwards or forwards accelerates or reverses the tracks.

■ I knew these bloomin' enemy chaps were bad shots, but does he have to get that close to fire on me?

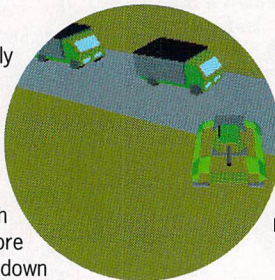


■ A quick blast or a slow plod – choose your mission according to your mood. The starter mission is a short burst of frenzied shooting and running (bit like the invasion of Kuwait, really)

EFFECTS

Solid 3-D graphics have rarely looked as good or moved as fast as in *Battle Command*. Attention to detail is spot on, with trees, hills and enemy vehicles all looking the part. Animation is smooth and rapid, and what's more there's no appreciable slowdown when a lot is happening on the screen. The static screens – the ones which enable you to choose weapons, for example, or look at the map – are all well drawn and functional.

Sound is fairly sparse – in fact, the only time you really hear anything is when you're under fire. You know when a missile hits you because of the sound, so in that sense it works fine.



■ (left) Whoops, big mistake, that, cutting up a lorry driver. Hey wait, I'm in a tank... Haha! Revenge!



■ Get a few hits and you can zip to the damage screen for an instant status check. Protect your weapons, but don't forget your tracks

VERDICT

Battle Command certainly comes up with the goods. It's very high quality, from the hi-tech weapons to the fast animation. The starter mission eases beginners in, but there's still enough depth in there to keep even the most ardent game-player happy for a while. Whereas previous games by this team had only one objective, *Battle Command* has 12 – and what's more, there's little probability of you successfully completing a mission the first time you try it. If you've got a bit of Christmas money left, buy this – you'll still be playing it next Christmas.

ANDY HUTCHINSON

GRAPHICS	9
SOUNDTRACK	7
INTELLIGENCE	9
INSTANT APPEAL	9
LONG TERM INTEREST	9
OVERALL	93%



■ Inside your tank and ready for action. On this mission you work for News International and you've got to escort those vans, with *Sun* journalists inside, into Fortress Wapping



■ Right, Johnny, prepare for a Banshee up the exhaust pipe, matey. Missile lock and bombs away! *Kaboom!* Never did like Skoda drivers trying to overtake me on the M-25...



■ Make it to your mission objective and you get to blow the hell out of something. In this case an oil refinery becomes a considerably more environment-friendly pile of girders



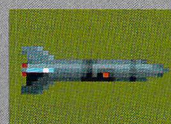
K-90: cluster bombs are nifty little units which detonate in the air and rain even littler sub-munitions over a wide area. Very lethal 50mm units with a range of 200m



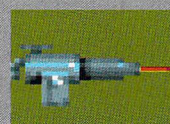
Skeet: a wicked little device, this. It skims across the battlefield looking for an armoured object, and when it finds one it automatically fires a shell down at it



Spectre: decoy flares like the Spectre are used to send heat-seeking missiles on a wild goose chase. You get only twelve in a magazine, though, so use them wisely



Dragonfly: wire-guided missiles like the dragonfly require a little time and effort because you need to fly them. However, they have a massive 4,000m range



Slam: this fully automatic chemical laser wards off enemy missiles: turn it on and it picks 'em off as they approach. You can't use another system at the same time, though



Phantasm: radar guided missiles are severely confused by a dose of chaff in the air. They mistake the little bits of metal for you, giving you the chance to do a runner

MIRRORSOFT/IMAGEWORKS £24.99

teenage mutant hero turtles

There's no way you can have dodged the Turtles. As if all the hype weren't enough to make you chuck, here's the ST game – and it offers nothing new. You must race through six New York levels and rescue Channel 16's news reporter, April O'Neil, from the evil Shredder. The game is split into two sections – an overhead view of the city streets and a side-on view in the sewers.

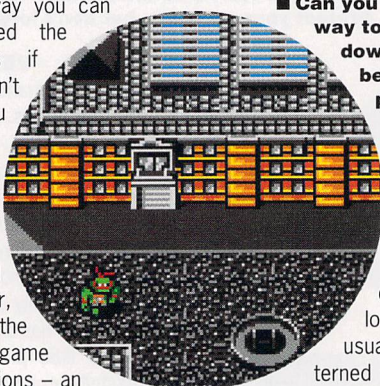
In the street section you must dodge the odd purple blob (they're presumably Shredder's henchmen) and disappear into a building or down the occasional manhole. Once you're inside a building or the New York sewers, the action switches to a side-on scrolling platform level. Here your task is to dodge or fight Shredder's mutant men, reach the end of the sewer and then escape to safety on the streets.

One of Shredder's cronies guards April O'Neil, who is tied up at the end of one of the sewage systems. By the time you've smashed him to the ground, someone else has come along and snatched her off again. When you follow them through the end-of-level door you're given access to the next level.

EFFECTS

OK, so the game really isn't anything special, but what about the visuals? 'Fraid not, no. Shredder's henchmen

■ Can you find your way to safety down a manhole before the purple blobs get to you? Do you care?



are almost totally shapeless splodges of colour, often lost against the usually highly patterned background.

They are terribly animated and look completely unbelievable.

You thought the Turtles were individuals? They're actually clones. The only thing to change between the four playing characters is the weapon. Each of the turtles can

walk, jump or roll into a ball but there are so few frames of animation involved that it all looks laughable.

And what about the scrolling? Erm, what scrolling? The display jerks left and right, making it very difficult to keep your eye on your active turtle. The sound effects have you reaching (or retching) for that volume control.



■ The Turtles must be famous – and that's not just hype: they've now made it as far as the ST. The problem is, this is a Turtley awful platform game, and if there were any justice in the world, someone would have started up a "Do not buy this game" campaign by now

VERDICT

It's always an ominous sign when a software publisher refuses to send you a copy of a game for review, as Mirrorsoft originally did in this case. You don't usually expect classic

games to emerge from licence deals, but with a £25 price tag and a name as big as the Turtles you envisage something a bit special. Gremlins 2, for example, was just a simple scrolling shoot-'em-up but there were heaps of Gremlins leaping about on pogo sticks, hiding behind the furniture and doing zany things.

In Turtles you don't have any of this attention to detail, so you're left feeling cheated out of your cash. It may scale the software charts on the strength of Turtlemania, but you're going to need a frontal lobotomy if you want to play this for more than a couple of hours.

MARK HIGHAM



■ "This is April O'Neil from Channel 16 News reporting. I'm being held captive in the city sewer by a band of mindless mutants and I want to go home." Donatello creeps into action, whips a stick out of nowhere and beats the ankles off this end-of-level baddie. Great move! That's why they call 'em half-baked heroes, or whatever it is...

TURTLE POWER

By hitting the spacebar you can select the turtle you want to play with – there are four in all (what, you knew that?), each of them equipped with different weaponry



Leonardo Wields a Katana Blade so sharp it could slice a hair in half – great for attacking Shredder's henchmen in sewers



Raphael The needle-tipped Sai is Raphael's preferred weapon. With it, he can make sharp, speedy and deadly strikes



Michelangelo The powerful Nunchukus enable Michelangelo to bring down the toughest of Shredder's henchmen with ease



Donatello The Bo looks like a simple stick but it has a long range and can take out enemies from above and below

GRAPHICS	5
SOUNDTRACK	3
INTELLIGENCE	1
INSTANT APPEAL	5
LONG TERM INTEREST	1
OVERALL	38%



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line of fire

US GOLD £24.99

This is just a straightforward blast-everything game. The original Sega arcade version of *Line of Fire* was eminently playable and had everyone hopelessly addicted, but the sprites were big and producing a successful conversion always looked tricky. Sadly, it hasn't gone at all well.

The game is split into levels with an end-of-level alien at the end of each – now that is a surprise! Throughout the levels you scroll forwards into the landscape, confronted by a stream of terrorists, missiles, helicopters and bombs. You move some red gunsights around the screen, point them at your target and fire. The mouse is the best way to control the sights but you can use the joystick at the same time if you wish. In this way, two players can play simultaneously.

When you run over any bombs or sustain a hit, a message appears on the screen informing you of damage. You can recover by picking up the occasional medical kit, but you must be careful – often you blast these kits by mistake.

EFFECTS

You only need to take a glance at the screenshots to appreciate that the visuals are very



striking. What you don't see, though, is the insanely slow speed at which they move. The attention to detail, especially in the parallax-scrolling backgrounds, is superb but there are very few frames of animation used in the movement of either the enemy sprites or the cen-

tral playing character. Combine this with the appalling speed of the game and you have something that is so unplayable it's a torture to try.

The final nail in the coffin is the way you lose sight of the cursor, with devastating results. The tiny red crosshairs get lost in all the blasts and before you can find them again you often find yourself dead instead. That's adding injury to insult, and then some.

Sound effects are the usual kind of spot explosions and ineffectual

noises which have you quickly reaching for the volume control. Believe us, you don't want to listen to these!

VERDICT

What is happening to US Gold? A software publisher that once used to produce some top games like *Operation Stealth*, *Strider* and *The Last Crusade* is turning out crap like *ESWAT* and *Line of Fire*. It's appalling enough that they should choose such games to release at the most competitive time of the year, but what's even worse is that they're charging almost £25 for them. What a rip-off!

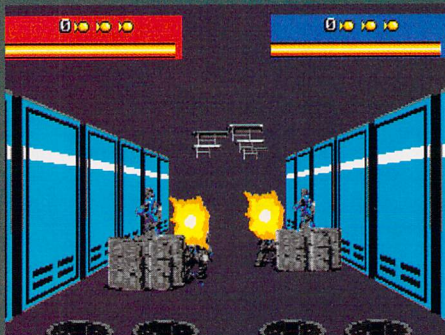
Line of Fire is a horrendous game and nothing like its hugely absorbing arcade parent. The scrolling is ridiculously jerky and the animation is almost non-existent. As if that wasn't enough, it's a travesty that the action pauses while the bad guys are loaded from disk.

The game's biggest problem is speed: it's so appallingly slow that it just isn't playable. There's little here for anyone, even the most forgiving novice. If you lash out on this one you're going to seriously regret it.

MARK HIGHAM

GRAPHICS	5
SOUNDTRACK	2
INTELLIGENCE	1
INSTANT APPEAL	4
LONG TERM INTEREST	1
OVERALL	39%

CAUGHT IN THE LINE OF FIRE? KEEP AIMING THOSE GUNSIGHTS!



■ Too late! Never mind, you can survive many hits before you finally bite the dust. Try and pick up the medical kits next time you spot them and avoid bombs underfoot



■ No, this isn't where you're going for your next holiday, unless you're the sort who'd find Kuwait boring. The map appears at the start of a level to show you where to go



■ The action pauses, the screen turns blue and moments later Michael Heseltine and Douglas Hurd appear on the screen. Aim... Fire! Now, where's the other one got to?

THE 1990 ATARI ST PRODUCT GUIDE

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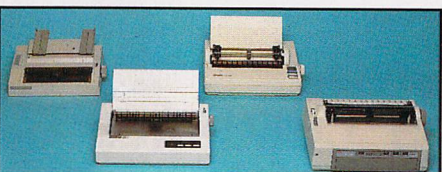
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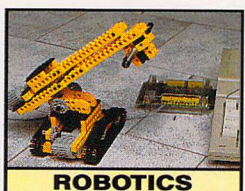
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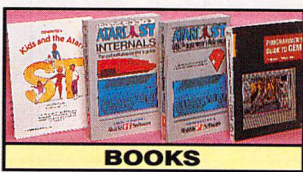
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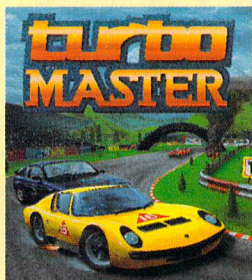
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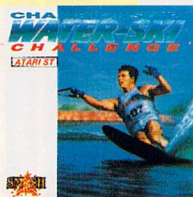
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mystical

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What a plonker! You've gone and lost all the Great Wizard's scrolls and phials. Needless to say, this doesn't do your career prospect as a novice magician much good.

Fortunately, the Great Wizard gives you the chance to redeem yourself by collecting all these objects again. Trouble is, they're strewn over some pretty hostile worlds, populated by equally hostile monsters.

Mystical is a vertically-scrolling shoot-'em-up. You watch your magician from above and behind as he ambles through the landscape. Here and there you come across the Wizard's phials and scrolls – pick these



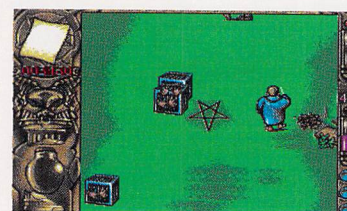
■ **The guardian at the end of World One. What a swine, casually chucking cherubs at you like that! Ah well, not a problem – you'll just have to waste the lot of 'em, poor little beggars**

them up in cages, turn them to stone and generally do horrible things to them, you beast you.

You have to traverse five worlds in all, each divided into three stages. There's a pentacle at the end of each stage and you have to hang around until your master's crystal ball appears and takes you off to the next section. And at the end of each World is a very nasty end-of-level guardian.

Between stages you can shuffle your remaining potions so that they can be used in the order that you choose, although it's not too difficult to cycle through them during

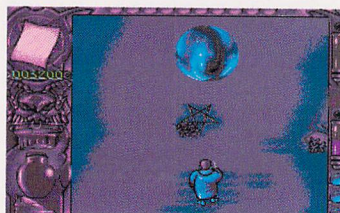
■ **Time to guzzle a potion...**



■ **Gotcher! You've used a cage scroll to imprison all the on-screen baddies. Now you've got to hang around by that end-of-stage pentacle wosname thingy**

up by walking over them. You also encounter monks that lob Bibles at you, sweet little shepherds flinging sheep, walking trees and hairy near-derthals to name a few. It's just too horrible for words.

To help you survive these attacks you can quaff some of the Wizard's potions for weapons or spells, or stop to read one of his scrolls. You can shout "Boo!" to scare the monsters to death, lock



■ **There we go – your master arrives to collect you, ready for the next stage...**



■ **You're between stages, with the chance to reorganise all your scrolls and potions**

play. It's the spells that lift *Mystical* above the ordinary shoot-'em-up, enabling you to pick just the right potion.

There is one problem, though: you must use the keyboard at the same time as the joystick. It takes precious moments to quaff a potion or read a scroll – and meanwhile baddies are busily doing their worst!

EFFECTS

The graphics are quite superb. All the characters are large and detailed, well animated and very funny. The graphics don't move particularly quickly, but the overall pace of the game is gentle, so it doesn't really matter.

Sound is great, with a terrific gothic-sounding title tune and some excellent sound effects – especially when you cast spells! "Very funny indeed. I chortled" – R. Lawton.

VERDICT

Mystical's gameplay isn't particularly deep. Although the ability to collect



■ **Blast those monks with your vampire bullets and send your golem to bounce on that dodgy geezer in front of you...**

and select spells adds to the depth, using the keyboard takes away the arcade immediacy and leaves you annoyingly vulnerable when you drink or read.

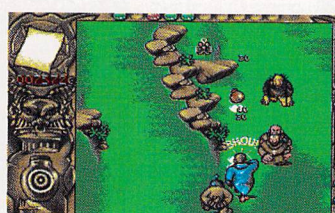
However, it's the graphics and sound that make the game. They are both very polished and highly entertaining – enough to turn a rather average game into a very good release. But will it keep you going for months and months? Not really.

ROD LAWTON

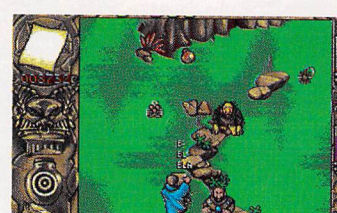


■ **You've armed yourself with a fire-aura potion. The bar on the left of the screen shows (top) the currently selected scroll and (bottom) the currently selected potion. Got all that? Good**

GRAPHICS	9
SOUNDTRACK	8
INTELLIGENCE	6
INSTANT APPEAL	8
LONG TERM INTEREST	6
OVERALL	76%



■ **Boo! That potion you've just drunk scares the... ahem... wotsit out of the baddies**



■ **Get on with it! Reading out the magic scrolls takes up precious seconds – time you don't have**

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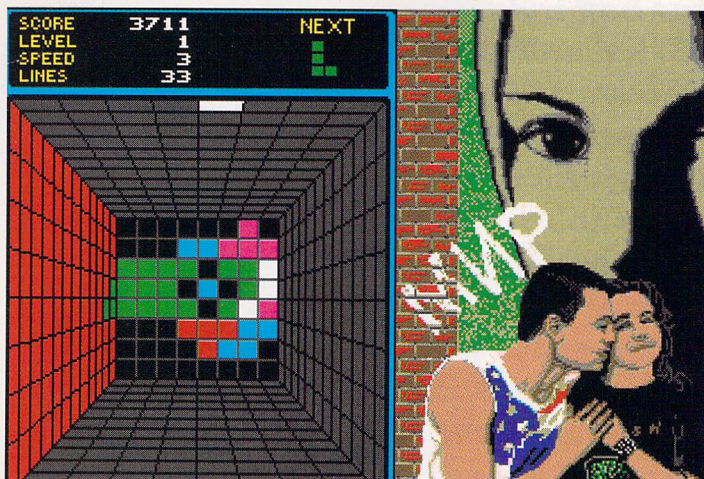
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How do you improve on Tetris, the Russian block-buster that had all us decadent Westerners marvelling at its compulsive simplicity? Well, Infoframes reckon they know how, and have come up with a new, improved version with four walls instead of one, loads more pieces and some extra rules to keep you on your toes.

The basic principle remains the same. As blocks drift down a wall you can rotate them and move them to fit into those already at the bottom. When you complete a whole line it disappears.

However, where Tetris had you forming lines on just one wall, Welltris has you doing it with four. You look down into a kind of well (hence,



■ Oh dear! You've landed a piece badly and blocked off that left-hand wall. Never mind, try discussing tactics with a close friend...

welltris

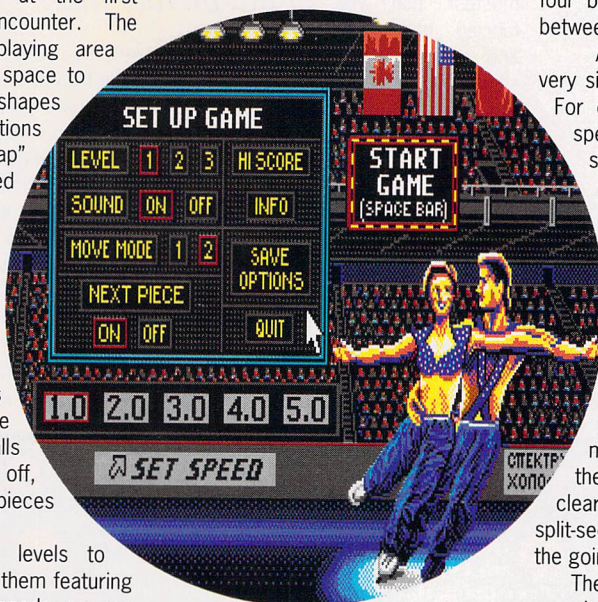
INFOGRAMES £24.99

the name) and must create lines on a "floor" at the bottom. The blocks slide down the walls and then across this floor, stopping at a wall it first obstruction they encounter. The dimensions of the playing area mean you have less space to work in but can drop shapes from any of four directions – the walls even "wrap" around. Complicated stuff, eh?

What's more, if you leave any part of a shape overlapping onto a wall it becomes unusable until you land another three shapes. This means that the game ends when all four walls become blocked off, rather than when the pieces pile up to the roof.

There are three levels to choose from, each of them featuring steadily increasing speeds as you

■ The options screen enables you to decide just how much punishment you want to take



progress. On the first level, the shapes are made of two, three or four blocks. On the second level it's four blocks and on the third level, between two and five blocks. Ouch!

Apart from this, the game is very similar to Tetris in appearance. For every demanding increase in speed on the left of the playing screen you get a brand new picture on the right. This depicts Russian scenes to prop up the inevitably rather plain graphics.

EFFECTS

The graphics are far, far better than those of Tetris on the ST. OK, so there's not much to them, but the shapes move rapidly in response to the controls, and are sufficiently clear and well-defined to allow the split-second timing necessary when the going gets tough.

The sound is minimal. There's a pseudo-Russian jingle every time the

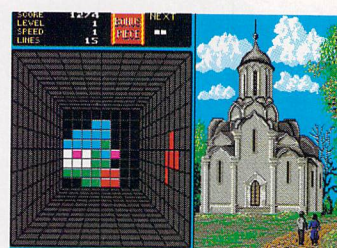
game speeds up, but after that you're back to some rather basic block-bashing noises.

VERDICT

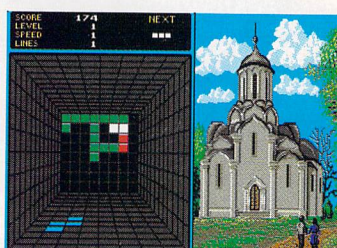
Tetris was brilliantly simple. Welltris has certainly added to the gameplay and depth of the original, but the result is a game that's no longer simple at all. The strategies are more complex and it requires greater lateral thinking – but it's not the same game any more. Welltris has more features, but in gaining these features it's lost the simplistic appeal of the original. And it's really not very easy to tell if you're doing well or not!

However, the responsiveness and playability of the game are much better. Welltris is definitely one for the eggheads, even those new to the ST – you'll take a long, long time to master its subtleties.

ROD LAWTON



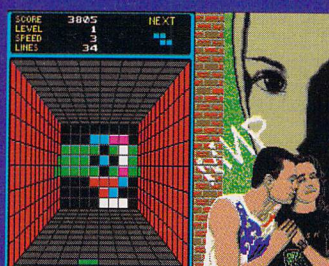
■ A bonus piece! Great, but look at the shape of the darn thing



■ A piece slides down the wall – where are you going to put that?

GRAPHICS	4
SOUNDTRACK	5
INTELLIGENCE	7
INSTANT APPEAL	6
LONG TERM INTEREST	7
OVERALL	71%

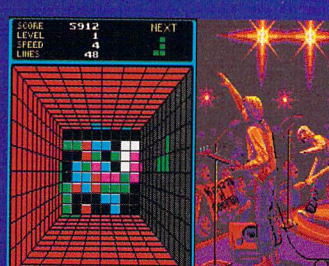
TRYING TO FIT THE PIECES TOGETHER AT THE BOTTOM OF A WELL



■ Eeek! Two walls blocked off! It's getting tough down there...



Even tougher, up to speed four – but at least the piccie's nice



Aargh! Three walls have gone down already! The end is near



That's it, game over! Perhaps you'd best go back to solitaire



Space Ace had truly gob-smacking animation but left you wondering what went wrong with the gameplay. **Rick Dangerous** was a

frighteningly addictive puzzle game but the graphics were far from state-of-the-art. So where's the ultimate game with **Space Ace**-style visuals and **Rick Dick**-quality gameplay? Mark Higham puts on his pyjamas, climbs aboard a magic carpet and asks if this could be the one



■ In *Prince of Persia*, you wake up inside this giant castle, dressed in nothing but your super-trendy pyjamas. What are you doing here? Dunno, but that busty blonde at the start of the game looked pretty smoochy so let's try and find her. Dodge falling tiles, leap across crevasses and duel with Arab swordsmen, all in an attempt to find the Princess... then wake up just before you get your due reward!

prince

Films like *Tron* and *The Last Starfighter* have proved just what computers can do when it comes to sophisticated animation and mimicking reality. Surprisingly, though, this animation has rarely found its way down onto the humble home micro. *Space Ace* came the closest, offering Disney-style animation on an ordinary ST, but it was more like watching a PD demo than participating in a game. *Prince of Persia* may not quite scale the same dizzy heights but the animation is absolutely incredible.

Don't expect a radically original plot, though. The adventuresque storyline goes something like this: the busty blonde little hostess with the mostest that you fancied has gone

and got herself imprisoned in a Persian castle. You must rescue her from her captors, produce a wedding ring out of thin air and marry her before she realises you're really a bit of a wimp.

Working out how to get through the castle is the hard part. Your task in each level is to discover the exit through to the next. Unfortunately, it's usually protected by malicious swordsmen and you don't stand a chance in hell of destroying them without locating the sword first. In

level one this means you have to work your way forward through the level until you get all the way to the end, pick up the sword, carry it back safely and then hack the head off of the bearded Arab. Once you've collected the sword it stays with you into the remainder of the levels.

What makes this objective even tougher is the heaps of puzzles you must solve to work your way through the castle. These are focused on trying tests of your joystick skill and simple switches. If you screw up and get killed you're returned to the beginning of the level to try again.

Through all this, the animation is wonderful. All the movement is so detailed that you can make your playing character run

over three tiles at a time, walk across single tiles or stop dead. To climb up ledges, you simply push the joystick up and your hero thrusts his arms into the air and pulls himself upwards. If you look like tumbling off a ledge, you can even thrust out your arms and grab onto the precipice – if you're quick. When it comes to jumping, you can either leap from a standing start or take a running jump over bigger gaps.

It's all beautifully realistic – but you do need to exercise all these

"Precise, detailed animation plus entertaining puzzles means a thoroughly absorbing game. If only all games could be like this!"

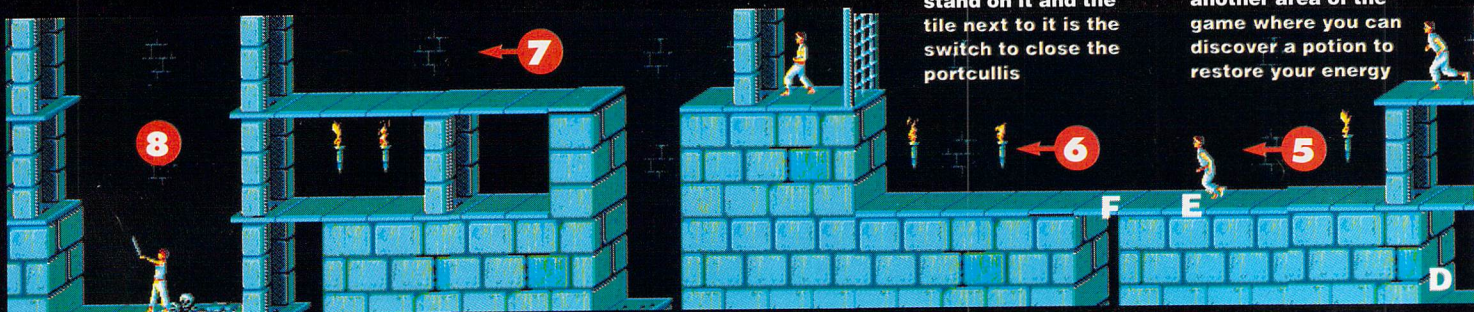
THE FORMAT GUIDE TO COMPLETING LEVEL ONE

8 You've discovered the sword! Now you can dash all the way back again and get the swordsmen back at the second screen. But be careful not to die on the way back, or you have to go and collect the sword all over again!

7 Inch back so that you have three blank tiles ahead of you and then take a running jump across the gap. Drop down a platform and continue to the next screen

6 This looks simple enough but there are two switches on this screen: one raises the portcullis slowly while the other makes it drop instantly. Take single steps up to E. This is the switch that opens the portcullis. Now take single steps up to F and then leap across the next two tiles. The tile at F drops from under your feet the moment you stand on it and the tile next to it is the switch to close the portcullis

5 Run straight across the platform and off to the other screen. Two tiles fall from under you as you go but they do you no harm. If you work your way down to D you can fall through to another area of the game where you can discover a potion to restore your energy



of persia

moves to work your way through the castle. In one of the screens on level one, for instance, you need to walk carefully over one switch to cause a portcullis to rise, then leap over the next two tiles – the first tile falls beneath you if you stand on it and the second causes the portcullis to drop before you can reach it.

If you fall down gaps in the tiles you can either lose energy or end up dead, depending on how far you fall. To refresh your energy you need to find a potion. These are often hidden in secret sections of a level which can only be discovered by jumping up and knocking out tiles above your head. All good fun, so long as you don't get killed in the process.

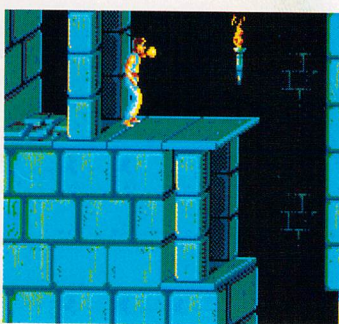
EFFECTS

Perfectly smooth animation is what makes *Persia* special. There are so many frames of animation used in walking, running, jumping and climbing that the movement looks brilliantly realistic. There's even several frames for such a simple activity as turning round. There's a tiny delay in the game's response to your movements and the animation tends to slow down slightly when there are other things happening on the screen – such as tiles falling around you – but this doesn't disturb the gameplay.

To move around the level you have to dash across rows of tiles. There is no scrolling, so as you move off of the end of one screen you're instantly transported to the start of the next. These screens are

all set against a boring black backdrop – but compensating for the lack of backgrounds are some kaleidoscopic intermediary screens between levels which are so colourful they make your eyes sting.

Sound effects are a long way off rivaling those used in *Space Ace*, where sampled music was played throughout. Simple sampled spot effects are used instead to indicate



■ In the course of the game you come across hosts of potions. Some give you extra time (great) or energy (good), but some others simply kill you off (not so helpful)

when you're running, collecting items or activating switches, and a sound chip tune introduces each level. There is a nice gory "shh" effect when you fall on the knives, though...

VERDICT

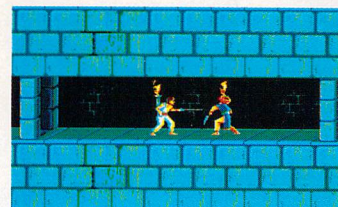
Prince of Persia is an enormously entertaining game. Even when you tire of the puzzles, you can still enjoy the quality animation. Each of the

screens is equipped with many testing obstacles, and when you believe you know a level inside out it's still possible to accidentally discover a pathway to more potions and another swordsman.

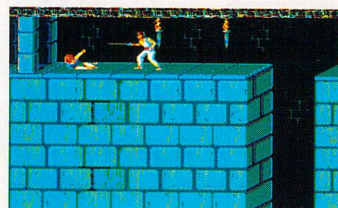
One major point in *Persia's* favour is the way the traditional lives system has been abandoned. Instead, you get a 60 minute time limit to explore the castle. This means you can die over and over again, always returning to the beginning of the level. The only complaint comes when you're tackling a few annoying obstacles and you're constantly returned to the start of the level rather than being given the option to continue from where you last failed. It's even worse when you race all through a level, pick up a sword and then fall down a hole just seconds before you meet the swordsman guarding the level exit. This is a minor complaint, though, and one you quickly learn to tolerate.

Precise, detailed animation is married with entertaining puzzles to produce a thoroughly absorbing game. If you're looking for something you can impress your friends with and still be addicted to after a marathon 12-hour playing stint, this is it. Let's hope *Prince of Persia* is about to mark a change in animation techniques so that we can finally kiss goodbye to the laughable character movement in such games as *ESWAT*, *Ninja Remix* and *Rick Dangerous*. If only all games could be like this!

MARK HIGHAM



■ Give this guy hell. Raise your sword and thrust it hilt-deep into his gut the first chance you get. Three such hits and he falls to the ground, writhing in blood-soaked agony. Er, excuse me, I'm starting to feel a bit queasy...



■ Notice his failing energy on the bottom right of the screen, with yours shown at the left. One last hit and he falls to the ground, clutching his stomach



■ Well, that's him out of the way! Now race on to the second level. Leap up and activate the switch tile and a door opens, giving you access to the rest of the game

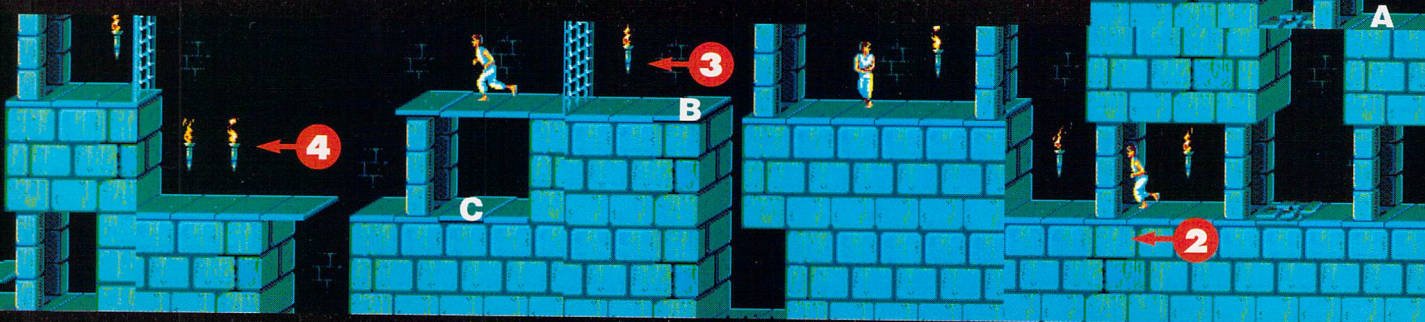
GRAPHICS	9
SOUNDTRACK	8
INTELLIGENCE	6
INSTANT APPEAL	9
LONG TERM INTEREST	8
OVERALL	90%

1 The level opens. Dash off the ledge and down to the next platform. The tile at A is loose, so when you walk over it, it falls from underneath you. Walk over A, wait for it to fall and jump down onto the next screen

4 Run off the end of the platform, then double back to hit the switch at C. Doing this activates the portcullis. Now step up to the edge of the bottom platform and leap across before the portcullis closes

3 Run towards the edge of the platform, then take small steps so you're standing right at the very edge. Now leap over the divide and take single steps backwards until you reach the tile at B. This is a switch which activates the exit portcullis. Wait for the door to rise, then run through to the next screen

2 Phew, made it! Now stand up, run left and climb the wall. If you run right you bump into one of the swordsmen, but since you don't yet have the sword you don't stand much of a chance



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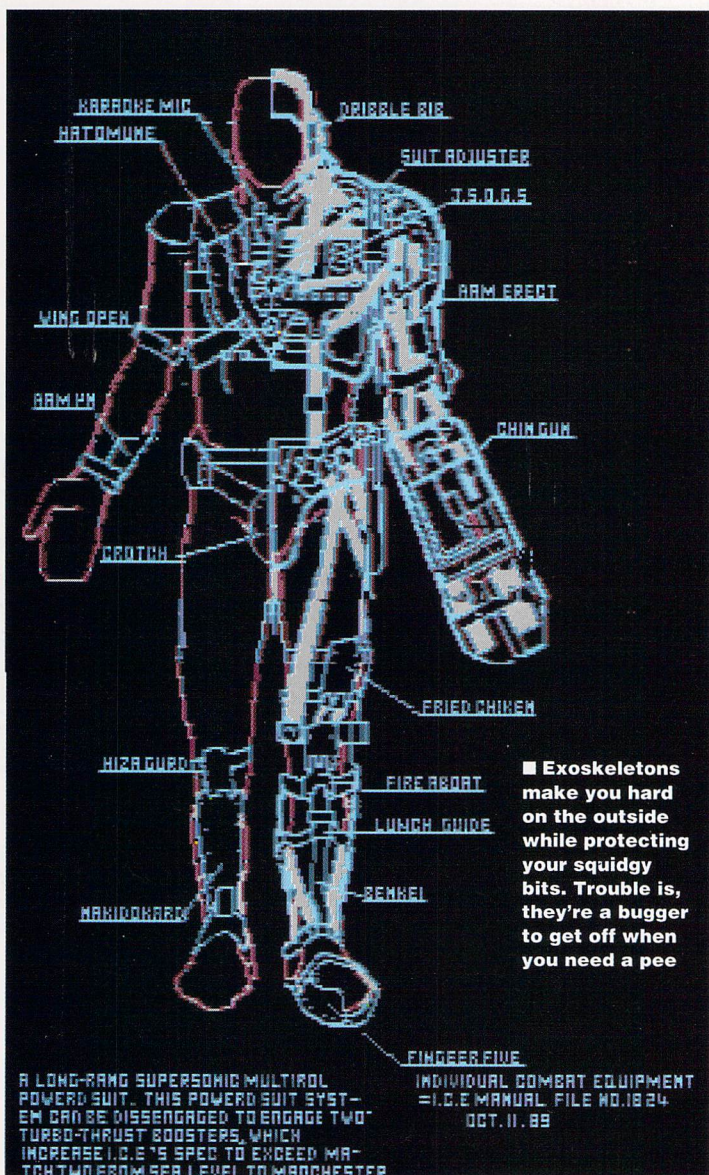
America is a strange and scary place. In US Gold's vision of the future you are a member of the CyberPolice and your aim is to make it to the elite corps of headbangers – the *Enhanced SWAT* team. *ESWATs* get to play with cybernetic exo-suits featuring duo laser-cannons. They also get the opportunity to say things like "Your move, creep" without looking totally out of character.

First you must prove to your superiors that you are of the right stuff by dealing with three gangland bosses. If you successfully make your way through the mean city streets, you get to meet these toughies in the flesh. Pop them off and your Chief rewards you with a promotional shoulder-stripe (but no pay-rise, of course!). Beat all three and you get to put on the cling-film suit and look cool.

In perhaps the worst example of a hackneyed game format, you get all kinds of nasty to deal with. The first is the poor animation: you are a kind of Pink Panther with a groin rash, unable to move your back leg past your front knee for fear of a devilsome chafe. Then you discover your next problem: your state-of-the-art, hi-tech weaponry is really a potato-popping spud-gun. Strictly



■ Club-wielding loonies and gun-toting thugs are a pushover, even with your paltry firepower – just shoot out of the back of your neck!



one bullet on screen per week, chaps. We don't want to overdo it!

As if that isn't enough, you can even fire backwards without turning round – a feat I thought only Clint Eastwood could carry off. A quick twist of the joystick fools the animation routine so it launches a bullet from the back of your neck, without printing your updated position.

EFFECTS

You must be joking! There is nothing new, exciting or even remotely out of the ordinary in *ESWAT's* graphics department. The sprites are poor and the animation is even worse.

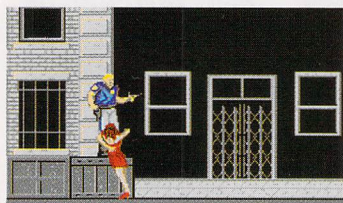
Sound is such an irregular visitor to the game that it barely registers: it consists of only a click or duck-fart every ten seconds. The intro music resembles a badly played rendition of the *Inspector Gadget* theme tune, but it's possibly the most solid part of the whole game.

VERDICT

Leave it alone, unless you've never played a scrolly beat-'em-up before – in which case you'd never know the difference. This one is guaranteed to provide five minutes of entertainment before you fall asleep.

ESWAT is actually an anagram of "waste," which is a fitting coincidence. Is it your time or your money that's being wasted? Is it both? I think we should be told.

NEIL JACKSON



■ Level 2: Kill the hood and the girl unties herself. Why couldn't she before? Stick around as she tries to show her gratitude...Oo!



■ Level 1: This fat person has the worst case of halitosis yet known to man. Crouch down low and shoot him in the gasworks

GRAPHICS	5
SOUNDTRACK	5
INTELLIGENCE	3
INSTANT APPEAL	4
LONG TERM INTEREST	2
OVERALL	31%



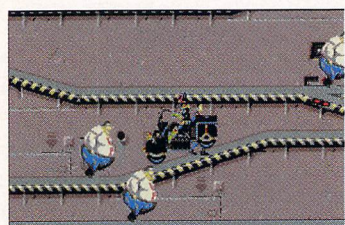
■ Level 4: Donning your external armour, you take on the tougher enemies. Firepower increases to a massive three bullets per shot!

Mega City One is a teeming metropolis, chock full of weird creatures. Keeping control of the citizens of this massive conurbation takes considerable time, manpower and, inevitably, ruthlessness. The honest policeman has been transformed into the judge – an enforcer who needs no jury to deal with the Big Meg dwellers – and *Judge Dredd* is the best judge ever to pass out of the Judge Academy.

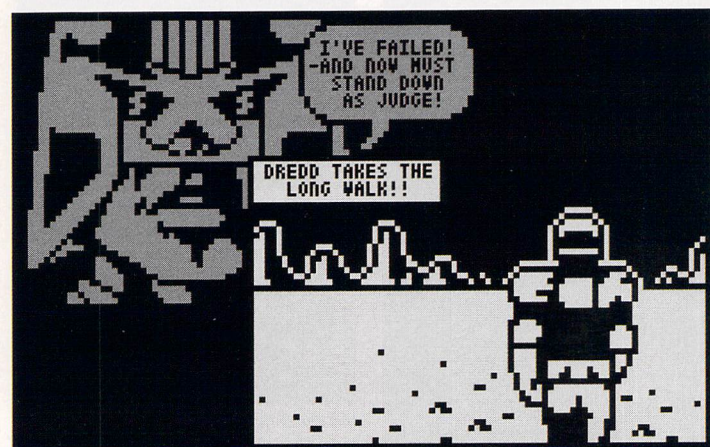
The game is essentially a shoot-'em-up. You control Dredd as he carries out various missions allocated to him by Justice Central. These take differing gameplay formats depending upon the location of the crime. There are six levels in all, with each level made up of two sections.

Level one is set in, er, the Dantanna block, where it seems the fatties are running amok, gorging themselves on food. You've got to wipe out all the food dispensers in order to calm the fatties down. Once you've destroyed a number of these overweight chaps in their white shirts, you find that they've taken over a food convoy.

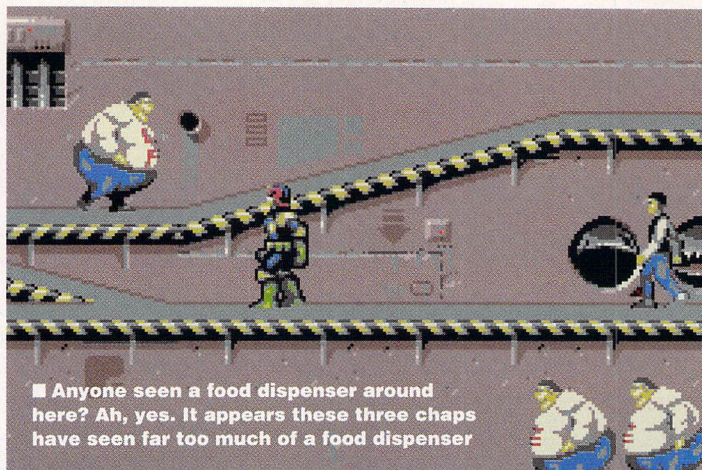
There's a total of 12 missions to complete and these continue in much the same vein. A mad professor in a laboratory, a runaway sludge



■ **This is the Lawmaster bike. It's a 4,000cc motorbike with a top speed of 567kph. Oh yes, and it can also drive itself. Handy for those embarrassing moments when both of your arms have been shot off**



■ **Screw up and it's a long walk through a hot, radioactive desert with your trusty Lawgiver gun and an extra pair of stout underpants**



judge dredd

**VIRGIN
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truck and a rogue weather station all conspire to ruin Dredd's day. The worst of the adversaries are definitely the malevolent and downright naughty Dark Judges.

You move Judge Dredd using the joystick, while the left [Shift] key enables you to choose between lasers and heat-seeking bullets for his Lawgiver gun. Pressing the Spacebar summons the Lawmaster

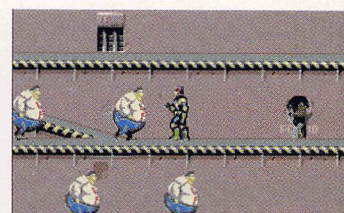
bike, although it's impossible to fire while you're astride it.

EFFECTS

Considering that *Judge Dredd* is a cartoon character, you'd assume the graphics should be



■ **Justice Central has allocated the formidable Judge Dredd his next mission. It seems that some group called the Fatties have started running amok in the Dantanna block. Apparently they insist that everyone start calling them the Stouties or the Big Bonedies instead**



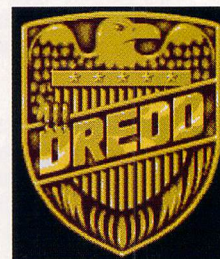
■ **These four gentlemen aren't too impressed with you blowing up that food dispenser. Oh well, switch to belly-piercing bullets**

important. Visually *Judge Dredd* fails because it doesn't make enough of the cartoon style. The character's animation is very average – he sometimes looks as if he's moonwalking – though the scrolling is smooth and seamless and the backdrops attractive and eye-catching. Sound is below average, a definite case for turning that volume right down.

VERDICT

Judge Dredd fails. A game based around this character should have been a rich and funny romp through Mega City One, but instead it's a poor and thoroughly comatose glance at the city and at Dredd. The game is simply a shoot/beat-'em-up, based on other platform games; walking around and shooting things is as far as it gets. There are some nice touches: you can play two sub-games, bomber and snakes, in the initial section of the game, for instance. However, these alone don't save *Judge Dredd* from joining the other mediocre licences in our circular filing cabinet.

ANDY HUTCHINSON



GRAPHICS	7
SOUNDTRACK	4
INTELLIGENCE	4
INSTANT APPEAL	5
LONG TERM INTEREST	3
OVERALL	41%



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Stop smirking, boy, I don't want any smirkers on this page. What do you think you're playing at, eh? I don't know, kids today. Don't know they're born. Right, you, Andrew Hutchinson, I've warned you once. You can write out 100 times, "Late arrivals, didn't make its and too crappy even if they did"

■ **Mercenary man is back. If you cheated death in the original *Damocles*, see how you fare in five new, radishly brilliant missions on the *Damocles Mission Disk***

DAMOCLES MISSION DISK

Novagen – £9.99

Groovy 3D worlds, lots of planets and a galloping plot were what made *Damocles* so popular. Your original mission was to save the planet Eris from death by large comet. Now Paul Woakes, the author, has designed five add-on missions to satisfy all the avid *Damocles* fans crying out for a bit more excitement.

There are five missions on this disk, each with a different angle, depending on how you played *Damocles* originally. In mission one, *Sabotage*, you're upstaged by Professor Hantzen, who's already planted the Novagen bomb. Can you swing things in your favour? Mission two is *Bad Luck*. You've stopped off on another planet before reaching Eris and have consequently lost all your money and your ship gambling. Can you still save the day?

Mission three, *Go for Gold*, sees another mercenary upstaging you and flogging the nova triggers at trading posts. In mission four the comet *Damocles* hasn't blown up and you've got to attach more explosive to it. In the last mission your demanding task is to join the Mystical Order of Carpenters by earning loads of dosh (no, really).

Fans of the original are sure to love these missions. At ten quid you're getting five whole new games to beat. What more do you want?

STF Rating – 85%

EDD THE DUCK

Impulze – £24.99

One of the least endearing aspects of BBC children's television of late has been Edd the Duck. This stupid puppet is about as much fun as sitting trouserless in a clump of nettles. However, Impulze seem to think that he must hold some allure: they've bought the licence and created a game around him.

You are said duck. Your mission (it says here) is to explore the departments of Television Centre, collecting stars along the way. Not-so-nasties such as teddy bears, fishes with

shades on and bananas attempt to thwart you. Your only protection is a snowball gun.

The game bears an inexplicably uncanny resemblance to *Rainbow Islands* by Ocean, except that your rainbows are replaced by snowballs. Gameplay, however, is quite good and I can see this appealing to the younger ST user. Let the kids play it before you buy it.

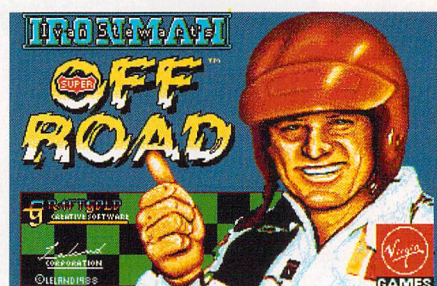
STF Rating – 73%

IVAN "IRONMAN" STEWART'S SUPER OFF ROAD

Virgin – £24.99

One question: who the blimmin' norah is this Ironman chap? I mean, what's the point in someone endorsing a game when the punters have never even heard of him? Next thing they'll be having Reg "Gout" Cruett's Daring Dominos.

Anyway, this is a multi-player racing game set in those monster trucks which you only ever get to see on Sky TV. The tracks consist of lots



■ **"Well booooy. We gonna take yew on a riiliilide neuuw. This heere big truck is yeauwer wors' naahtmare, y'hear?" "We got him now, Bubba... squeal!"**

of nobbly ramps and water hazards, and you've got to get around in one piece – and preferably in first place. If you don't do so well, you can buy lots of extras to help you out at the end of a race. Acceleration, shocks, tyres and nitrous oxide are all up for grabs.

The control method is far from perfect. It's all too easy to oversteer and find yourself



■ **Edd the Duck. Quite possibly the worst, most moronic puppet ever conceived. (Even worse than Andy Crane.) Here's your chance for revenge on the lot of 'em: explore Television Centre, break into the news studio and hold Nicholas Witchell to ransom**

➤ screaming round the track in completely the wrong direction. What's more, the computer vehicles become extremely difficult to beat after only a couple of circuits. A nice game ruined by grotty control.

STF Rating – 68%

FINALE COMPILATION

Elite – £24.99

Jumping on the compilation bandwagon comes Elite with this offering. Compilations can either be good news because they mean cheap games, or very bad news because they mean crappy games repackaged. In this case

five varied games are included: *Paperboy*, *Overlander*, *Ghosts 'n' Goblins*, *Space Harrier* and *Frank Bruno's Boxing*.

Paperboy is a conversion of the original coin-op game from Tengen. You've got to deliver the papers while avoiding the traffic, the dogs, the kiddies and the kerbs.

Overlander is a car pursuit game where you're a mercenary

out to earn big money. *Ghosts 'n' Goblins* is a medieval fantasy beat-'em-up in which skeletons, dragons and fire-spitting plants want your skin. *Space Harrier* is a frantic shoot-'em-up and *Frank Bruno's Boxing* surely needs little explanation.

These are all reasonable games, but they're getting a bit long in the tooth. Some of them are well over two years old and aren't really worth investing in. Buy an ST FORMAT Gold game instead, preferably one from this decade.

STF Rating – 65%

NINJA REMIX

System 3 – £24.99

Two years ago *The Last Ninja* became a big hit for System 3. The martial arts fighting, combined with a great plot and tasty gameplay, proved to be a popular choice with the discerning beat-'em-up game player. However, the follow-up, *Last Ninja 2*, wasn't very good at all. It rehashed the elements of the original and

combined it with lousy control and overly intricate rock hopping. Now System 3 want to clear their name, and *Ninja Remix* is how they reckon *Last Ninja 2* should have turned out.

Most elements of the game have been tweaked, revamped or re-written. Joystick control of the Ninja is a lot easier, making fighting and jumping considerably less trouble. The tunes have been revamped, though they're still boring internally generated ditties.

Gameplay has been considerably improved, although it's still very awkward when you try to pick something up. *Ninja Remix* is a considerable improvement on *Last Ninja 2*, but is that enough to warrant a £25 price tag?

STF Rating – 81%

■ "Hooo-aaa... you're egg fried now, Mr Ninja! My whirling nunchukas protect me like a shield of... oh... you hit me... Hmmp" (Prolonged sulk)



■ The paperboy's lot has never been a happy one. Lugging huge great Sunday papers around in all kinds of weather, and for what? A miserable 50p and a sore radished bottom. This poor chap's even got mad lawnmowers chasing him round the streets

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3. If you're most at home in a car then here's a subtle plan. Remove one of the footmats (the one on the passenger side, say) and replace it with your ST. The perfect trip-meter is yours

4. Worried about your diet? Deposit your ST in the toilet bowl and have it check the contents

of your bowels at every morning "session." You could be in for a shock at every flush!

5. If cooking's your thing, try this radishing plan. Replace one of your baking trays with your ST. It can then check regularly on the state of your food as it cooks

6. Rugby fans can now go hi-tech. Swap the ball for the ST and have it report on all those long passes, scrums and tries

7. Surfing freaks can live on the crest of the wave and compute by surfing on their ST. You could have it keep a record of all those totally tubular moments, er, man

8. Train spotter? Replace your clipboard with the ST and log all those dead interesting trains as they whizz through

9. Are you a wheel clumper who's run out of clamps? Perhaps you could just lie in the road yourself... or simply strap your ST to the tyre of the offending vehicle and have it play a digitised message to the owner on his return

10. If you keep failing exams try this. Screw four legs to the base of your ST and substitute it for one of the desks in the exam room. Now you can just access a database of answers... without anyone noticing!



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Level One

Cavern: get silver coin (7G), diary, pickaxe; N

Tunnel: pull lever (opens north door); N

Tunnel: get stone bag; W

Tunnel: wield stone bag; (F2, F3); kill monster with stones; (H, F3, F2); push barrel to east wall, getting pickaxe on the way; jump on barrel; get charm (20G); S

Tunnel: get Runic Stone (Turn Monster spell); kill spider (either throw stones, or just walk through it); NN

Tunnel: move sacks (push/drag) to get gem; kill maggot; S, E, E, S

Main Chamber: avoid worm since it just regenerates; E

Tunnel: jump over block; E

Chamber: get key (1), loaf; W, W, N, W, S, S, E (uses key (1))

Cavern: open chest → parchment; read parchment; get stone bag; pull lever (opens south door in Main Chamber); W, N, N, E, S

Main Chamber: jump on barrel; get rope; drink Stamina Potion from barrel if necessary – but don't waste it! This is your main source of Stamina Potion on this level; come back and drink it when you are in need. Kill the worm if you want to; S

Tunnel: throw pickaxe at wall; push pickaxe into wall; S

Passage: search skeleton → book; read book (6 pages); E, E, N, W (S)

Well: touch key; move south to avoid blast from monster; get key (2), skull; E, W (N)

Store: open chest → loaf, chicken, funerary coin; get all; E, N

Gaol: insert key (2) in keyhole (opens four other doors from this room); get coin (46G); get Alcohol Potion; if you want a fight, N(W), S – kill the monster – made easier by dropping a skull in its path); N(E)

Cell 2: give alcohol, loaf, loaf, chicken to prisoner; S, E, (S)

Cell 4: get key (3); W, S, S, E (uses key (3))

Passage: get gem; read tome; push button (raises trapdoor cover in Cadaver Store); E, E

Embalming Room: search skeleton → key (4); get key (4); search cadaver if you want a fight; N

Balm Store: insert key on floor into keylock to open east door in Embalming Room; kill spiders; get Red Cross Potion (stamina), Refreshing Potion (cures poison), Shot Shield Potion; (barrel and acid potion are poison); S, E

Purificatory: get Learn Potion Scroll, Frogskin Potion (giant jump); W, S

Offal store: get coins (6G+); N, W, W, N

Cadaver Store: drop rope down hole; kill maggots if you want to; walk into hole

Pit: open rat → key (5); get key (5); get key (6) (on ground); open chest with key (6) → urn; get urn; E (uses key 5), E

Pit: get four gems; W, W

Pit: throw six gems in lake – teleport to Lord's Crypt; S – the door north of you is not the door to the Lord's Crypt – you have just been teleported again!

(ALTERNATIVE EXIT FROM PIT: get all the bones; go to Tunnel

Tunnel: Stand below chain; drop bones on top of each other; jump on pile; jump to chain → Secret Chamber: use key on floor to open door; S)

Passage: W, W, W, (H to Wield Stone Bag), S

Passage: Kill Jumper (you can dodge under it, or you could use a Turn Monster to hold it still); use Key (4) in keylock to open South Door (there is a parallel passage just to the West with another Jumper and another keylock – they lead to the same place. You can only open one route – it doesn't matter which); S, W, W

Mourning Room: Kill Jumper → Charm (100G), two Holy Water Flasks, Trapped Jar; S

King's Chapel: Kill Jumper → Key (7); get Key (7); W, N

King's Armoury: Get Shield (with King's device), Breastplate (Wulf III), Helm (with circlet of gold), well-wrought Sword; S, W, S

Treasury: Open Chest (uses Key (7)) → Coin, Leg of Meat, Book; get Coin (20G), Meat; N

Ante-Room: Push Button. If you are carrying the correct four items from the King's Armoury, then they return to the Armoury and you are teleported to the Inner Treasury!

Inner Treasury: Get Crown, Charm (100G), Coins (500G); pull lever → Ante Room

Ante-Room: E, E, N, E, S

Great Chapel (North End): Kill monsters (let the first one nearly land, then nip out and in through the door – stand near the door and throw a stone whenever one passes within range); S

Great Chapel (South End): Kill monster; S, S, W

Purificatory: get flask of Holy Water (you should now have three); drop flask in bowl; drink from bowl → teleport to Inner Treasury

Inner Treasury: pull lever → Magic Shield

In this solution, if a direction is ambiguous then it is followed by another direction in brackets to make it precise – so W(N) Door means the Northernmost door on the West wall. M in brackets means Middle. K stands for Key. Keys are marked **Kn** to highlight their locations.

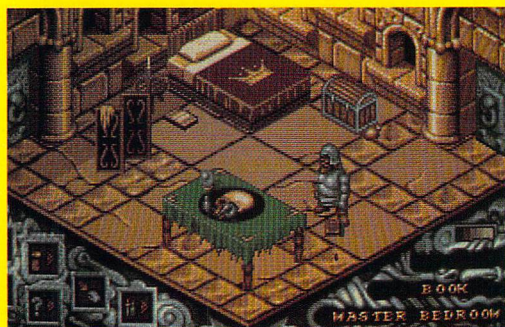
NOTES:

If x is on y then jump onto y to pick up x – you normally have to be touching things with your feet. To drop x on y, jump onto y before dropping x. To make high piles jump up, press the space bar while you are in mid-air – drop items from the air onto the pile! Read all parchments, books, tomes, etc – always check in case they have more than one page.

ters



*Stuck in that crypt? Can't escape from the Planet of the Robot Monsters? You need the **FORMAT** guide to real estate...*



■ Well, no, madam, it may not look like a study, but just add a bookcase or two...

Potion; get it; pull lever → teleport to Treasury; N, W. Repeat this with the other two flasks of Holy Water to obtain Magic Missile and Mind Blast Scrolls

Treasury: N, N, E

Crematorium: Drop urn on right hand stone shelf → blood; get it; W

Inner Sanctum: drop blood on altar → key (8), read Magic Scroll; get them; insert key (8) in keylock to open door to W; W

Robing Room: (take Wrath Helland's urn to the Crematorium if you want to fight some spiders); N

Library: get Map Scroll (use it if you wish), Parchment ("Azarcen ..."); S, E, N, N

Great Chapel (North End): jump on flames to open door to E; E, S

Lesser Shrine: get key (9); N, E (kill spiders), N(W)

Holy Crypt: search urn → maggot, Charm; get Charm (30G); S, N(E)

Lesser Crypt: move stones until you find Bless

Weapon; get it; S, S

Warrior's Crypt: drop funerary coin on Kazak's Tomb → Fire Shield Potion; get it; kill spider; N, E

Common Crypt: (use key on altar to unlock the door that has just locked behind you); push four stones off altar → Cure Potion; get it; push urns to floor → Dispel Trap Scroll, Jar; get Scroll; open Jar (50G); E

Shrine: get Coins (40G), Stone Bag; (disturb rat → maggot); W, S

Glutton's Shrine: drop meat on altar → Super Fast Potion; get it; N, W, W, N, N

Treasury: cast Dispel Trap on chest; open chest (uses Key (9)) → book, charm, urn; get charm (100G), urn; S, S, W, S, S, W

Robing Room: cast Dispel Trap on chest; open chest → Read Language Scroll; get it; drop parchment; cast Read Language on Parchment; read Parchment; E, N

Great Chapel (South End): drop urn on Carolus's Altar → Unknown Scroll and door to Guardian now open; cast Read Magic on Scroll → Massacre Scroll; get it; N, N, N, N, W, N (this door can be opened earlier by pressing the buttons in the passage to the East. The prisoner told you that button 1 comes first (the left-hand one) – the sequence is 1432, learnt by trial and error)

Guardian: cast Massacre at Dragon; search Dragon → two Charms, Coins; get Charms (200G each), Coins (300G); push button (opens North door – this works only if you have the Crown with you); N

Teleport: pull lever → LEVEL TWO!

■ Next month we take a look at another level – in the meantime, see how much further you can get!



■ Des. res., mod. furn., plenty of handy storage space. Solidly built, but lots of scope for improvement. Suit anyone not fussy about windows. First to see will die – er, buy

PACLAND

Grandslam

Wendy Little is a sure shot supremo at this crazy little game, and she's also found this cheat. Type in "AVALON" on the title screen for infinite lives.

CYBERBALL

Domark

When the game starts, catch the ball, then run out of bounds. The defence are behind you. Run in for touchdown before the defence run at you. I find short play while you are defence works best. Highest score so far 104-18, winnings \$999,000.



■ The playground's not far, madam, and do your children always wear that armour?

ROBOCOP

Ocean

Pause the game and type in "MURPHY". Now when you press the mouse button your health goes up. Lisa Reed from Bath says fifteen seconds to comply.

STUNT CAR RACER

Microprose

Paul Groom from Middlesbrough in Cleveland has got through several joysticks on the way to completing this nifty game. Take it away, Paul:

The Little Ramp: should be easy. All you have to do is take the ramp itself at no less than 130 mph. However, the hump shouldn't be taken at more than 200 mph – otherwise you lose a lot of time in the air.

The Hump Back: take the first hump at any speed up to around 130 mph. There are two options available when negotiating the bumpy straight that follows:

- 1 Take it at a sedate pace (under 150 mph);
- 2 Put your foot down and rocket through it at over 200 mph.

Keep your foot down for the next hump but slow down for the straight, since there is a sharp bend. Once past the final bend ignite the boosters and sprint to the line.

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➤ **The Stepping Stones:** the ramps on the first length of straight should be taken at either over 200 mph or under 150 mph. In order to attain a smooth landing after the next ramp, make sure you are travelling at about 150 mph. Meanwhile, take the stepping stones at between 140 mph and 175 mph. Finally, when you have cleared the last turn, race to the line.

The Big Ramp: race at top speed around the course – except, that is, for the two small ramps, which should be taken between 160 mph and 180 mph. The huge ramp should be taken at over 210 mph.

Division 2:

The High Jump: in order to clear this you must be racing at over 200 mph. Otherwise, the angled straight should be taken at about 170 mph and the rest of the track at full speed.

The Rollercoaster: the largest hill should be taken at a maximum speed of 160 mph. Stay at that speed until you are three quarters of the way down, then open the throttle for the rest of the track.

Division 1:

The Ski Jump: start the race and stay at about 30 mph until you reach the end of the third straight. Put the pedal to the metal and remember the ski jump must be taken at over 200 mph.

The Drawbridge: once again, this track is pretty easy to complete. Attempt the drawbridge at around 140 mph and pelt round the rest of the course at full speed.

BARBARIAN

Palace

Nicole Hunt, who writes from somewhere in England, is a bit of a wizard with an axe. She sends this helpful advice:

Level 1 – always “flying-neck-chop”

Level 2 – roll into his corner and kick

Level 3 – roll into his corner and either kick or headbutt

Level 4 – roll and kick or chop his legs

Level 5 – chop his legs and neck

Level 6 – chop his legs and neck

Level 7 – Try and keep down and chop his legs

Level 8 – keep down, chop his legs

Level 9 – keep down and chop his legs

Level 10 – Roll and kick but lie down if he tries a flying-neck-chop

Drax – avoid the fireballs (one hit and you die)



■ We prefer to say “compact and bijou,” Mr – er, Indiana. Not related to Washington Irving or Minnesota Fats, by any chance?

INDIANA JONES

Lucasfilm

Type “SILLYNAM” as your name into the high score chart for infinite continue options. Also try typing “IEHOVA” when the title screen comes up.

The border flashes grey to tell you the cheat is activated. The “2” then advances you through the flash-points of the level, “L” moves you to the next scene, “I” supplies you with an icon. Kevin Dunn from Willian in Hertfordshire has been saving Indy’s neck with these handy pokes.



CHASE HQ

Ocean

If those horrible criminals have been getting the better of you, try John North from Surrey’s advice. At the start of the game, when it says Nancy is at HQ and that there’s an emergency, press [Fire] and keep pressing the space bar. This causes you to rocket along at 999 mph. As you get to the arrow, press [Fire] and pull the joystick back. This cuts the time between you and the criminal down drastically, enabling you to nab him.

LOMBARD RAC RALLY

Mandarin

Pressing the [Escape] key stops the race and the clock, and so as long as you stop it before the first time place you receive the top prize.

With your prize money save up to £750. This enables you to buy a 2.8 litre engine at £400, four wheel drive at £250, front lights at £50 and fog lights at £50.

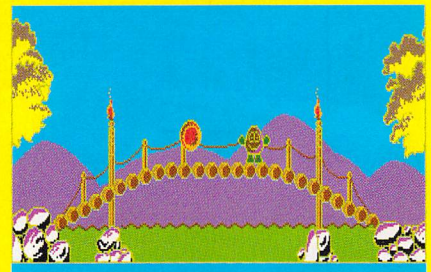
With all these extras you can enter the full rally and win. However, if you can’t, the [Escape] key still works. Thanks to Carl Gizzi from Rhyl, Clwyd for those rallying hints.

TREASURE ISLAND DIZZY

Codemasters

Get the snorkel and weight, put weight on hook and jump up. Find gravedigger spade and the pogo stick (in the clouds). Go into the water and go to the island in the sky where you find the fireproof suit. Jump off the island and get a coin off the mast of the old ship. Drop the pogo stick and get the crowbar, take it to the trembling rock and drop it. You can see bubbles which you can use as lifts to get you to the other side. If you drop down a hole you are in the air pocket where you can get yet another coin.

Use the gravedigger spade and drop it next to the grave. Find the store and the pier. You first need to trade in the egg for a boat. To obtain the egg enter the smuggler’s cave and



■ Passing traffic, madam? Hardly any, I promise you – just the odd pedestrian...

pass straight through it, but don’t forget your fireproof suit. Enter the cave which has the egg. It is surrounded by a rainbow of colours – but be careful! It is booby trapped.

Jump on the stone pillar which holds the egg and stand as far to the edge as possible. Grab the egg and run down the cave, being careful not to stop – you risk getting squashed. Falling rocks are also dangerous. Go back through the smuggler’s cave and drop the fireproof suit (but you do need it again later).

Get the dynamite and follow the fish through the water until it disappears. After getting the boat to the pier, you need a motor. Go with the snorkel and dynamite and go back to shore, and go through the tree village (picking up the detonator) to the caves. Place the dynamite near the blasting area and jump behind a rock and drop the detonator. The fallen rock blows away and you can now obtain a bag of gold coins.

Trade these in for the motor and return to the pier where you can drop it on the boat. You find that there’s no petrol so you need to buy some from the store. Take the axe and the bible to the bridge, drop the axe in the centre and you fall down to more water. You need to jump out again to re-arrange things or otherwise you lose your bible. Go into the water and get Hookjaw’s treasure. There is a curse on it so be careful!

Jump out of the water and head back to the store (you can drop the bible here if you like) and trade in the petrol. Take it to the pier again, but you still need the ignition key. At the pier you may notice a yellow key. Get it and go into the smuggler’s cave. You should see the fireproof suit down there; take that as well. Walk along and you see a door which looks rather like a trapdoor. Use the key to open it and get the vintage brandy. Trade this in for the ignition key and you’re off. Jump on the boat and you’ve done it!

Raymond Wightman from Carnforth in Lancs is dizzy but satisfied with that cheat.

ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS

Domark

Gerry White from Cardiff has found a wicked little cheat for this addictive puzzler. When you reach the rooms containing the “Reptilians,” collect the Bombs from the lockers. When you enter the room which contains the Reptilian, a door closes behind you. Walk past the Reptilian, until you reach the other door, push the joystick back and forth and forward, press left shift to drop bombs, and you find you can walk through to the transporter. Do this in every Reptilian room, and you can complete your task.



SKATE TRIBE**Mandarin**

Level 1: Don't be greedy; just concentrate on getting past the level.

Level 2: Stay in the middle of the screen on top of the road tracks and you're safe: bombs fall on either side of you.

Level 3: Jump to the right hand side of the screen and try to get on the rail in the middle.

Level 4: Do not look at the board and about every half second move right and left.

Level 5: Jump straight up if a car comes towards you.

Level 6: You don't have to kill all the airo pede: you can if you really want to, but your score

depends on how many sections you destroy.

Level 7: Learn the movements of the snake – one way is to get to the right.

Level 8: Zigzag from side to side and you should miss the bikes.

Level 9: Avoid money, and if anything gets in your way or comes towards you keep jumping.

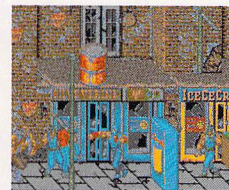
GUNSHIP**Microprose**

Select your mission. Destroy the enemy, then land at your home base. Insert disk A, select "end game," and put disk B back in when prompted. Take off vertically, then land again. You get medals galore, plus you go from

Sergeant to Colonel in rapid time. Gerry White from Cardiff is our man with the helicopter.

SHADOW WARRIORS**Ocean**

To activate this cheat wait until you die, but have at least one credit left and wait until the timer that allows you to continue comes up. Then simultaneously press the one and two-player keys. From then on, whenever you die press the one and two-player keys together all three of your lives return. You can do this as many times as you wish, but unfortunately it only works in two-player mode. Kamal Jethwa has been verily beating 'em up.



■ Close to amenities, incl. shops, transport, heavily-armed ninjas

TURRICAN**Rainbow Arts**

On the first scene of level one, climb to the top of the hill to the left. Climb back down to the first small ledge and press [Fire]. A block appears in the air, and shooting it reveals hidden bolt-on extras.

Thanks to Tim Hale from Lydney in Gloucestershire for that tip.

IKARI WARRIORS**Elite**

Stephen Cross from Lancashire has been driving a swath of destruction through this beat-'em-up. Get into the tank and go up to the metal box that shoots at you. Ride through it and then abort the game. Now when you start a new game the tank is invincible!

FAST LANE**Artronic**

Tristan Cliffe from Norwich reckons that if you have trouble gaining Pole Position all you have to do is to pause the game (f1) during qualifying and then restart it. The lap timer should have stopped running. All you have to do then is complete the lap without crashing, as slowly as you want to.

RAINBOW ISLANDS**Ocean**

Type in the following while the first title screen is being shown, remembering to press return after the letters. This cheat only works once per loading. The mysteriously Christian-nameless C Birch from Oxford has been rainbow bouncing.
SSSLLRRS = Always has fast rainbow
RJSBJSBR = Always has double rainbow
BLRBSBJ = Always has fast shoes
RRLBBSJ = All hidden food is money bags



■ Lge. formal gdn... Oh, I hate being a real estate agent. I want to be... a lumberjack!



In a burst of energy, he holds the key out to you, taped to a card, and falls down on the ground.

OPERATION STEALTH**Delphine/US Gold**

Matthew Wilkinson of Welling in Kent has come up with this guide to operating stealthily. Go to newspaper stand, examine return coin slot, use coin in coin slot. Move to the toilet room, operate briefcase, take pen, take American passport, operate calculator, take unused passport. Operate up arrow button until the correct passport appears. Use unused passport on opening. Press red button, operate briefcase.

Go to passport control officer, use passport on passport controller. Go to welcome hostess, speak to welcome hostess, examine telegram. Move left, go to guard, use airline ticket on guard. Move to first baggage carousel, examine baggage which says Mr Martinez, take baggage, operate baggage.

Go to the bathroom, operate razor, use electric socket. Go to passport officer, use original passport on passport officer. Walk left, get in taxi. Examine American passport, take bench of notes, go to bank, use bench of notes on bank clerk. Use coins on florist, take red carnation, use red carnation on John. Go to park, sit on bench.

Move quickly to the right and go to the bank, use card and key on bank clerk, go downstairs and enter vault, use key on safe (bottom right). Operate ground, use ropes on ground. Operate ground, examine the part of the wall where the breeze is coming from. Operate pickaxe three times on the wall.

Now comes the difficult part: swim under and over the rocks, and watch the oxygen level at the top. When you have finished this you come out at the florist. Walk to the beach and talk to the man. Use coins on man. Go to the hotel, press button and go to level 2, and walk

to floor 3. Go to the last door and operate it. You meet Julia and Otto (your double agent).

They kidnap you and put you on a boat. The very first sentence, operate the bracelet. When they throw you off the boat and you reach the sea bed, operate the bracelet again. Swim over to Julia and operate her (oer). On the surface one of Julia's friends picks you up and takes you to their hideout.

Well, here's the boring bit, going through five levels of mazes. Not too hard, really – just a question of getting to the key and going back to the stairs. Operate the door and go into the office, go over to the statue and operate the statue's arm. A safe appears. Use the little box on the safe door: turn the box on. Operate the up and down arrow until the first light on the box comes on (if two lights come on, this means that there is a double figure combination), then press the lock combination button. This moves it on to the second figure. Repeat this for the rest of the three digits.

Press the lock combination button until the line under the digits goes off the screen, turn the box off, then remove the little box. Press the lock combination one more time and this reveals the secret envelope that you need so much to get in contact with your agent.

Run after the man in the white coat and follow him on a jet ski – all you have to do is avoid the sharks. The second bit is really hard because you have to avoid Otto's men.

Go to the seaweed screen and examine all seaweed until you find an elastic band. Go right till you reach the last screen and examine the palm tree. Operate it, operate button, then go to the entrance and operate the opening.

You now find yourself in a cage about to be eaten by goldfish – what are you going to do? Use pen on lock and then use watch on the right and left walls. Go to the grille and wait till the rope tightens, then operate grille. Then it's another five levels of mazes that you have to get through.

More on *Operation Stealth* next month!

APB**Domark**

Anthony Bekesi from Liverpool has found this hidden cheat. Type "ALF" into the high score table for infinite demerits.

KARATE KID PART 2**Activision**

If you're having problems with this game, simply press "P" to skip the current screen.

SUPERCARS**Gremlin**

Robert Mannall's zipping around London in this racing game. When asked to type in your name try:

Rich – gives you 500,000 credits**Odie** – for level 2**BigC** – for level 3**NETHERWORLD****Level 9**

Colin Crampton from Kent has found that if you get your name on the title score board and type UxZ158 you get infinite lives.

PIPEMANIA**Empire**

If you want to collect the 50,000 points bonus, fill the screen with pipes.

ATOMIC ROBOKID**Activision**

Start the game as normal. Kill the first three enemy gun emplacements, then kill the next four

gun emplacements as well. There should be a little green ledge: manoeuvre your Robokid onto it. Jump up a few times and you find yourself in the cavern. This tip comes courtesy of Eloise Spark from Weston.

R-TYPE**Activision**

As soon as you are about to insert disk 2, press the [Help] key, keep it held down and then press the M and E keys all together. During the game you can simply press F5, F6, F7, F8 to access the different levels. Richard Smith from Middlesex is the extremely awfully really quite good chap with the knackered joystick.

XENON**Virgin**

Here's a small tip for Xenon. If you've had enough of all those aliens, you can give yourself a bit of a rest. As soon as you have killed the second-level guardian, kill the two ships that you come to first and then smash into the wall. For the rest of the level there are no aliens.

XENON 2**Mirrorsoft**

Here's an even smaller tip for Xenon 2. If your hand aches while you're playing, all you need to do is switch on your auto fire. **stf**

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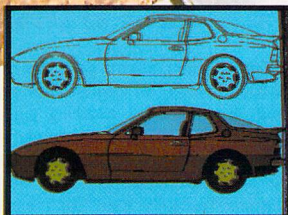
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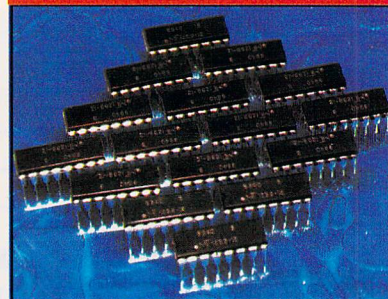


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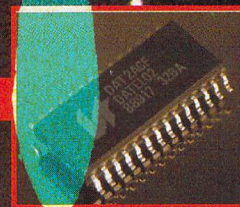
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the kandy coloured tangerine flake streamlined picture show

Is Brush Mode a French fashion accessory? Are Ellipses EEC-approved mouthparts? These questions are highly unlikely to be answered by Neil Jackson, the Gallery host who checks out most of the post

This month, TTKTFSPS (that's Hungarian for "GALLERY") brings you the latest crop of digital masterpieces that have wended their way through sleet and snow to end up on the ST FORMAT doormat. They're all displayed here, for all the world to see, say "Cor, strewth! That's really rather spiffing, isn't it, what?" and sip mulled wine in front of.

Every month, we cough up large sums of cash (well, £25 is pretty big, innit?) for the best entry submitted by a reader. Just think, it could be you! All you need to do is knock up a load of

Jackson Pollocks on your favourite art-package and then sit down with a pen and paper – or a typewriter, or your trusty ST and your favourite word processor – and tell us how you did it. We want to know what art-package you used, your favourite techniques, how long it took and any "inside information" that you may have on the creation of your stunning pictures.

The only drawback is that we can't return any submissions. No, not even if you enclose an SAE and send us a long monologue on how that disk has been in the family for years, since

Uncle Henry won it from a peasant in Burma during the war. We need to be able to hang on to entries for future issues just in case we can't print all the good ones in the current mag.

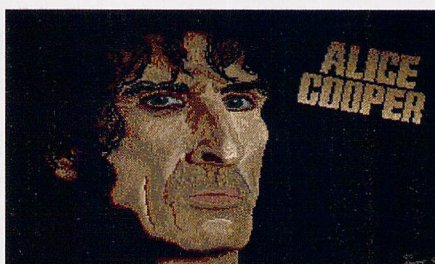
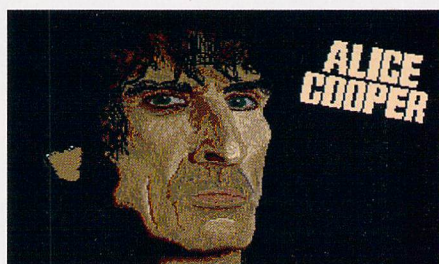
To make life even easier for us, please remember to put your name and address on the disk itself, as well as on your accompanying paperwork. And please don't forget to tell us the name of the art package used. While you're at it, why not check the disk for viruses before you send it to us at: The Gallery, ST FORMAT, 30 Monmouth St., Bath, Avon BA1 2BW. **stf**



Andrew Treherne, alias **Raphael Darkangel**, from **Ackworth, West Yorks**, created this picture of Alice Cooper with the popular **Degas Elite** by drafting out the basic outline using K-Line and Freehand Draw and then working on the nose in magnify mode (pic 1). Close-up work continued on the eyes and mouth. The mouth is tough to position correctly, so Raphael worked on it as one chunk and then Cut and Pasted it to the final location (pic 2).

Text is next, when all the filling is done, using a standard font which is then stretched as a block, altered in magnify mode and then rotated to the desired angle (pic 3). Finally, Raphael tidied up the hair, spent 30 minutes getting the ear detail correct, prettied up the text and finally signed it. The whole picture took around five hours to do, with the hardest part being Alice Cooper's famous squint.

■ **Degas Elite £24.95 from Electronic Arts**
☎ 0753 49442

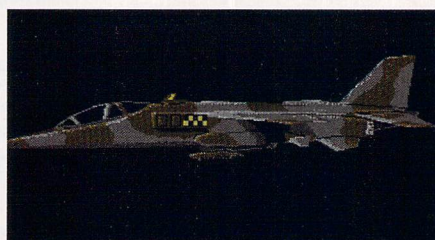
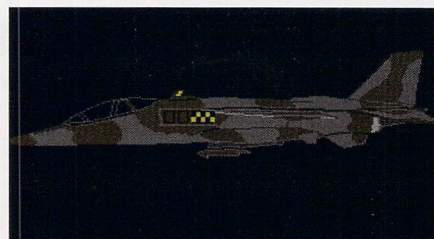
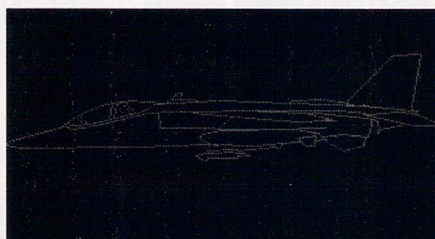


Tim Watten from **Droitwich** used the Public Domain version of **NeoChrome** for this picture of a SEPECAT Jaguar fighter plane. The four stages in its creation were:

- Sketch the basic outline (pic 1).
- Add simple colours to the shape to demarcate the coloured areas (pic 2).
- Add highlights to give the picture a three-dimensional feel (pic 3).
- And finally add the squadron decals, wing details and touch up any rough edges (pic 4).

■ **NeoChrome**, a Public Domain program, is part of the **ST FORMAT Graphics Collection** – see **Special Offers**, page 152

■ For reviews of the whole range of graphics software available for your ST – and much, much more – why not check out **Get the Most from Your ST**, edited by **FORMAT's Mark Higham**? See page 151





Scott G Mackay from **Inverness** is another user of *Degas Elite*, the most popular art package for the ST. His first step in creating this picture of a Cheetah joystick (somehow "still life" doesn't seem the right term) was to choose a suitable palette. His first choice of white, grey and black didn't give the right effect, so he added one bit of blue to each colour: instead of black, which has an intensity level of 000, he used dark blue of value 001 and so on.

Using a mixture of K-Line (continuous line) and freehand draw, Scott sketched the basic shape of the joystick (pic 1). Next, using magnify, for close-up checking, and more K-line, to keep lines parallel, he tidied up the basic shape (pic 2). Then he added base colours (pic 3) and began shading, using a palette of seven blues, seven red-oranges and a dark grey to highlight and darken the joystick (pic 4). To get more subtle shades, colours were mixed, using a

pixel-chequerboard pattern, in magnify mode. When two similar colours are mixed in this way, the optical effect is that a third colour appears, with a tonal value halfway between the two original colours (pic 5).

Finally, Scott created a background on a separate screen, using the same colour palette and the same mixing techniques. The completed joystick was then cut and pasted on top, creating the finished picture (pic 6).



Julian Buswell from **Portsmouth** uses *OCF Art Studio* for his artwork: it has a zoom facility which can display the main features of the face all at once, and he reckons the drawing facilities are easier to use than other art packages'.

His first move is to draw the basic outline for the face and add minimal details (pic 1). The shape doesn't need to be perfect, since it can be re-shaped when the detail is added. It's important to note that a face contains a minimal amount of lines – it's constructed mainly by shadow. Julian fills in every alternate pixel with a colour in order to blend different shades.

The complete Joker's face has ears, neck and teeth added, and the face itself has been re-shaped several times (pic 2). After this the clothing, hair and hat are added and the background colour is changed to make sure all detail is visible on screen (pic 3).

The next stage is the creation of Jack Nicholson's face, which is constructed in the same way as the Joker's (pics 4 and 5). Finally, the two images are combined on one screen and a background is added (pic 6).

The most important thing to remember, Julian comments, is that the face won't always look like the real person until all the shading is

complete. A few pixel alterations can create different looks. This picture apparently looked like Bob Hoskins and Robert Wagner before it was finished! The Joker took eight hours to draw, while Nicholson took four, and the background another two. Time well spent! **stf**

■ **Advanced OCF Art Studio £19.99 from Datel Electronics ☎ 0782 744707**

TOP TEN ARTISTS AND PICTURES

Steve Carey, Ed: Renoir, *Les Parapluis*
Mark Higham, Deputy Ed: Kandinsky, *I can see it but I can't remember what it looks like (!)*
Neil Jackson, Tech/Disk Ed: Salvador Dali, *The Persistence of Memory (The Limp Watches)*
Andy Hutchinson, News Ed: Edward Hopper, *Nighthawks*
Alex Soboslay, Production Ed: Neal Adams, *X-Men nos. 56 – 63*

Dan Goodleff, Production Asst: That German Bloke, *The one with the trees and the abbey*
Jules Stuckes, Art Ed: Richard Estes, *Booths*
Martin Parfitt, Designer: David Oxtoby, *Can't remember the names*
Jane Richardson, Asst Publisher and Child-bearer: *Not sure, something in blue prob'ly*
Greg Ingham, Publisher: *Dunno the name, but it's the one with the crying boy*

■ Yes, folks! A chance to ride in Future's very own spiffing balloon and even fly in Microprose's Cessna Piper. Your feet just won't have time to touch the ground!



win a day to remember

Microprose and ST FORMAT are combining to offer half a dozen of you lucky readers aday out you'll remember for the rest of your life, probably...

Last issue, readers with good memories will recall, we previewed *Flames of Freedom*, the successor to the extraordinary *MidWinter* (reviewed in *ST FORMAT* 9, and a notably high-scoring *FORMAT* Gold, achieving an incredible 96%).

Now if *Flames of Freedom* is even as good as *MidWinter* – and Mark Higham's in-depth preview suggests it could well surpass it – it's a game that's going to light up the winter evenings of thousands of ST owners.

So, as so often on these occasions, we decided to celebrate the fact with a competition of humungous great proportions. Here's what's on offer:

- An all-expenses visit to Microprose HQ and lunch with some of the weirdest and wackiest characters you're ever likely to encounter;
- A flight in their ever so cute four-seater Cessna Piper plane;
- A fistfull of Microprose's finest software;

■ A trip down from Microprose to the *ST FORMAT* office to meet some more weird and wacky funsters and see just how Britain's biggest, brightest and best-selling magazine for ST owners is carelessly flung together (shurely "lovingly hand-crafted"? – Ed);

■ And a flight in the Future Publishing balloon, complete with a first class opportunity to revisit your lunch.

On your trip you'll meet some of Microprose's top programmers, as well as the witless morons that put *ST FORMAT* together each month. But then, every silver lining has a cloud.

All you have to do is answer the accompanying *FORMAT* competition questions. Send the answers to us, at *Flames of Freedom* Competition, *ST FORMAT*, 30 Monmouth St, Bath BA1 2BW, before the end of February on a postcard and "Bob is," as they say, "your parent's brother." **stf**

A MENSA-STANDARD COMPETITION QUESTION

1. What is the name of the programming team behind both *MidWinter* and *Flames of Freedom*? Is it:
 - a) Maelstrom,
 - b) Microprose or
 - c) Bill Stealey?
2. Who is the best known member of the team that created both *MidWinter* and *Flames of Freedom*? Is it:
 - a) Jeff Minter
 - b) Tony "The Frog" Federucci or
 - c) Mike Singleton?
3. Which company publishes both *MidWinter* and *Flames of Freedom*? Is it:
 - a) Mirrorsoft,
 - b) Mindscape or
 - c) Microprose?

THE RULES BOX

1. This competition is not open to employees of Microprose or Future Publishing or their relatives.
2. Entries must be received before the end of February, and this time we'll do our very best not to pull out the winners' names before the competition closes.
3. Submitting multiple entries is a rather expensive way of disqualifying yourself from the competition. Wouldn't it be simpler just not to bother entering?
4. Prizes offered must be taken on the date offered. No alternatives are offered.
5. If you do happen to reacquaint yourself with your lunch, don't blame us.
6. The prizes are taken entirely at the winners' own risk. If the winner is too young to travel unaccompanied, expenses for transport of parents or guardians cannot be met by Microprose.
7. Judge's decision is final.
8. Everyone who works at Microprose must go "Woof" when the prizewinners arrive at Tetbury. Except for Peter Jones and Adrian Parr, who are far too dignified for that kind of thing, probably.
9. Entry of this competition implies acceptance of these rules in their entirety.

MIDWINTER II

FLAMES OF FREEDOM

The Flames have been lit - A new age dawns.

Midwinter II. Flames of Freedom will be available for your Atari ST, Commodore Amiga and IBM PC compatibles in the Spring of 1991



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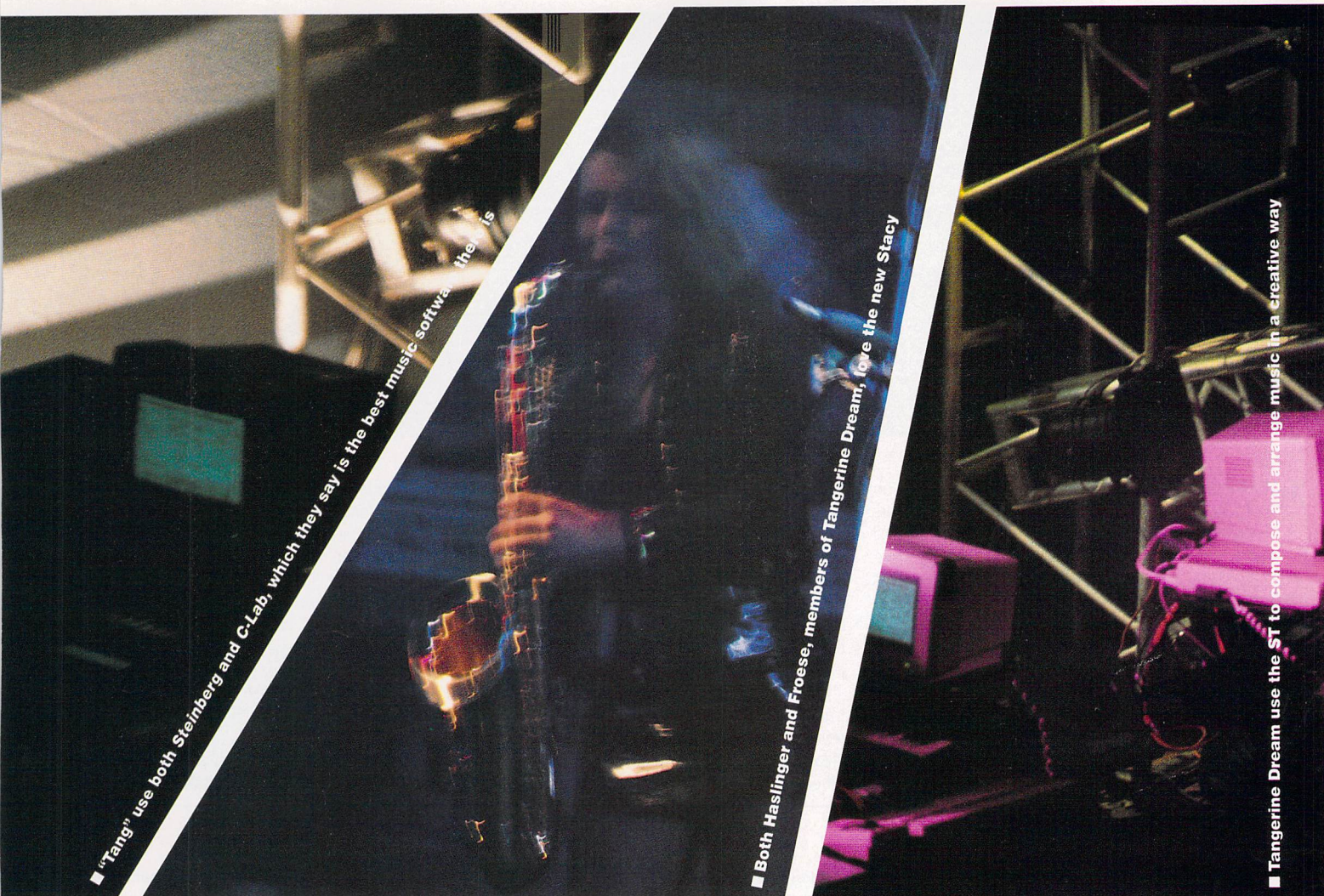


■ Tangerine Dream - live! And note that their STs are well to the fore

■ Tangerine Dream have long been advocates of the ST's musical capabilities

the ST goes live

You know your ST is a great games machine, and you may even know that it makes a great word processing and graphics computer. But did you also know it's the professional musician's choice, too? Steve Cogan reports



■ "Tang" use both Steinberg and C-Lab, which they say is the best music software there is

■ Both Haslinger and Froese, members of Tangerine Dream, love the new Stacy

■ Tangerine Dream use the ST to compose and arrange music in a creative way

Are you one of the many thousands who bought or were given an ST over Christmas? If so, you may not know about one of the ST's strongest points. Its built-in MIDI ports enable it to talk directly to synthesisers and the like, and this has led to the existence of some exceptionally good professional music software.

The result is that the ST is the preferred hardware for many of the world's best-known musicians, from Madonna, who used STs on last year's world tour, to Fleetwood Mac, Soul-II-Soul, Betty Boo and many, many more. In fact, most weeks on *Top of the Pops* you'd be hard pressed to find an act that *hadn't* used STs somewhere along the way.

One of the first to exploit the ST's potential – live and in the studio – were Tangerine Dream, who were for that very reason sponsored by Atari on a series of tours. They've also contributed to the development of many a piece of software – the latest being the acclaimed *Cubase* from Steinberg.

In their 23 years, Tangerine Dream have sold over seven million albums worldwide, with five gold records and three sell-out tours in the USA. The line-up has changed many times, and now only founder Edgar Froese remains of the original band.

Paul Haslinger, the other member of Tangerine Dream, is a classically-trained Austrian keyboard player, and *ST FORMAT* interviewed him prior to their first UK tour for over four years.

Why, we asked, do they use STs? "It's a long development from the first sequencers that could

just produce a single scale," he says, "up to the first MIDI sequencers like the Yamaha QX1, and then on to the more sophisticated computer software. But it's all giving us chances to compose and arrange in a certain set-up that we create ourselves – that's basically my perspective on it.

"The first programs I used had very bad timing and very few features. Now we actually work together with Steinberg, trying to give them input from the musicians' side and make the software into a better tool.

"I was never very fond of mathematically structured software: it looks like a calculation or something, and not like a music program at all. But I think in general it's a display problem. To have a big screen is a bigger point than what software you're using, because as soon as you can put it on a big screen you just have musically many more possibilities.

"100 years ago you bought the instrument and everything came with it. Today your instrument consists of maybe two or three computers, a couple of sound modules and the mixing and effects facilities – so you can reconstruct and re-edit your instrument all the time."

"Of course we have a lot of customised equipment, but we're also using the normal stuff that everyone uses, like Roland, Yamaha, Korg mod-

ules, and we try to give those companies input too. The Korg Waystation at the moment is a very interesting instrument and the [Akai] S1000-S1100 family is definitely a new sample standard.

"As far as ST software is concerned, we use both Steinberg and C-Lab, and both are really professional – possibly the best pieces of software that exist for musicians.

"For a lot of programmers the operating system is a big problem, and changes there would be my first request. Second, I think the Stacy laptop could be a wonderful machine for musicians – if they get rid of the little mistakes it has. They should do this quickly and not make a big deal out of it." (In fact, since this interview Atari have relaunched the Stacy, sorting out just the problems Paul refers to – see last month's News.)

"I think the music market is the big plus that this computer has. Atari shouldn't let the musicians go, because they are the main group of people they count on." This is possibly a little biased:

"The ST is the preferred hardware for the world's best-known musicians – like Madonna, Fleetwood Mac and Soul-II-Soul"

though the ST is the choice of many professional musicians, they're a tiny proportion of ST users, after the game-players (the vast majority) and others interested in serious/productivity uses such as desktop publishing and graphics.

What's it like depending on the ST – especially live? Do they ever get breakdowns? "Yeah, there was one major gig on the US/Canada '88 tour. We had a transformer for 110V-220V and all the instru-



■ For the boys in Tangerine Dream, the Atari ST has shown itself to be the ideal machine for creating, arranging and performing their music

ments were running on 220V. The STs were on 110V, and ten minutes before the end of the concert the transformer blew up! The result was all the instruments were off, but because they were on 110V the STs stayed on. The funny thing was that the whole of Atari's distribution personnel in Canada were in the concert so they were glad – everything blew up but the STs!"

One of the most exciting new developments in the ST music world is direct-disk sampling, enabling you to transfer master tapes to hard drive, then experiment, distort and edit endlessly, without losing any quality and without the restrictions that working with a physical medium

imposes. This has become possible on the ST in only the past year or so.

"We don't have a main direct-disk sampling system yet," Paul says, "though we have experience with *Soundtools* and the Steinberg system. I'm sure that in the next year we'll see digital multitrack solutions for a very affordable price that get rid of a lot of the problems we have with the analog machinery."

How do Tangerine Dream go about creating a track using the ST? "It's always different," Paul replies. "The normal way is that someone has an idea and puts it on a sequencer, shows it to the others and says 'What do you think?' That's how

we decide whether we work on it or not. But a lot of our songs have been really long in development. You start on a song, you work on it three months later and then another year later you finish it. Some songs simply need time to grow – and when we reach a certain point we say we have to put it out!" **stf**

These pictures were taken by Rob Cogan at Bradford's St George's Hall, where Tangerine Dream played to a packed house during their recent live tour. Of course their three Mega STs played a big part in the show – though they use trackballs rather than ST mice, which tend to jump about somewhat in the general hubbub!

FORMAT GUIDE TO MUSIC SOFTWARE FOR YOUR ST

Whatever your level of expertise, there's a piece of ST music software to suit you, from Public Domain material, available for just a couple of quid, right up to the fully-featured software used by a whole range of professional musicians.

Henry Cosh Sequencer

MACHINE: ALL STs **PRICE:** £2.50

FROM: GOODMAN OR YOUR PD LIBRARY

CONTACT: 0782 335650

A classic piece of Public Domain software, the Henry Cosh Sequencer – *Accompanist*, to give it its proper but less well-known name – featured in a special edition on *ST FORMAT's* Cover Disk 16. (Where were you then?)

As you'd expect from PD, it's a little limited for professional use, and for the younger generation the selection of song files is bound to look a bit stone-age, but it's very user-friendly and quite extraordinarily good value. It's the ideal introduction to creating music on your ST. Go for it.

Music Construction Set

MACHINE: ALL STs **PRICE:** £9.99

FROM: ELECTRONIC ARTS

CONTACT: 0753 49442

Though it's not exactly state-of-the-art (what do you expect for a tanner, for God's sake?), *MCS* remains a cheap, fun, flexible and surprisingly powerful entry-level music package.

TCB Tracker

MACHINE: ALL STs **PRICE:** £39.95

FROM: MPH **CONTACT:** 0603 503382

REVIEWED: *STF* 16: 93% – *FORMAT* GOLD

Released to a blizzard of critical approval, *Tracker* is amazing. It gets your ST sounding like you

wouldn't believe, requires no hidden extras or hardware add-ons to get you there, and it's user-friendly too: you don't need to be any kind of techie wizard to get started with this one! Promise: you won't regret buying *Tracker*.

■ You can even try it first: a demo version appeared on *ST FORMAT* Cover Disk 16.

Quartet 2

MACHINE: ALL STs **PRICE:** £49.95

FROM: MICRODEAL **CONTACT:** 0726 68020

A cracking, low-level package that gets your ST to make some astonishing sounds. And, thanks to some techie-type wizardry that needn't concern us here, compositions of several minutes take up just a few K. If you can't justify spending hundreds of pounds on a truly professional program, the newly upgraded version of *Quartet* is definitely worth your dosh. Highly recommended.

Tiger Cub

MACHINE: 1MBYTE STs **PRICE:** £99

FROM: MCM **CONTACT:** 081 256 3454

The entry-level module of the acclaimed Steinberg series of ST sequencers, *Tiger Cub* is aimed at the serious novice. As such it represents an excellent opportunity to see what all the fuss is about. Powerful, friendly and a bit on the cheap side... but enough about the Editor. *Tiger Cub* is all of these things, and more besides.

Steinberg Cubase

MACHINE: MONO STs **PRICE:** £550

FROM: EVENNODE SOUNDWORKS

CONTACT: 0993 898484

What was that strangled murmur? You didn't know software could be this expensive? But look what kind of a package you get! We are talking high-

end, professional, serious music gear here, and then some. *Cubase* is the successor to Steinberg's incredibly successful *Pro-24* series, which many bands – Tangerine Dream among them – cut their ST teeth on.

Steinberg had a big lead over the rest of the field, but for whatever reason lost out in the UK to *C-Lab* (see below). Yet such is the price and time investment in getting to grips with software of this complexity that many bands have stuck with Steinberg. You could certainly do worse, though if you are a newcomer to the ST then you may prefer to opt for the *C-Lab* route.

C-Lab Creator

MACHINE: MONO STs **PRICE:** £299

FROM: SOUND TECHNOLOGY

CONTACT: 0462 480000

C-Lab Notator

MACHINE: MONO STs **PRICE:** £499

FROM: SOUND TECHNOLOGY

CONTACT: 0462 480000

For many budding (and rich) musicians, *C-Lab* represents the eighth wonder of the world. These packages – *Creator*, a real-time 64-track sequencer, and *Notator*, with full built-in score edit facilities – represent some of the finest software ever produced for musicians on any computer anywhere, ever. The printed page can hardly convey the power and intelligence of these programs. If you think we're exaggerating, get along to one of the many music fairs held around the country, or visit a decent Atari stockist. This admittedly costly material is highly, highly desirable. Put it on that list of things you intend to buy when you win the Pools – or maybe try to make friends with someone who is quite rich and very generous. **stf**

Presenting

PROTEXT 5.0

Five years to the month after Protext version 1 was launched Arnor are pleased to present version 5, an enormous leap forward in both ease of use and performance.

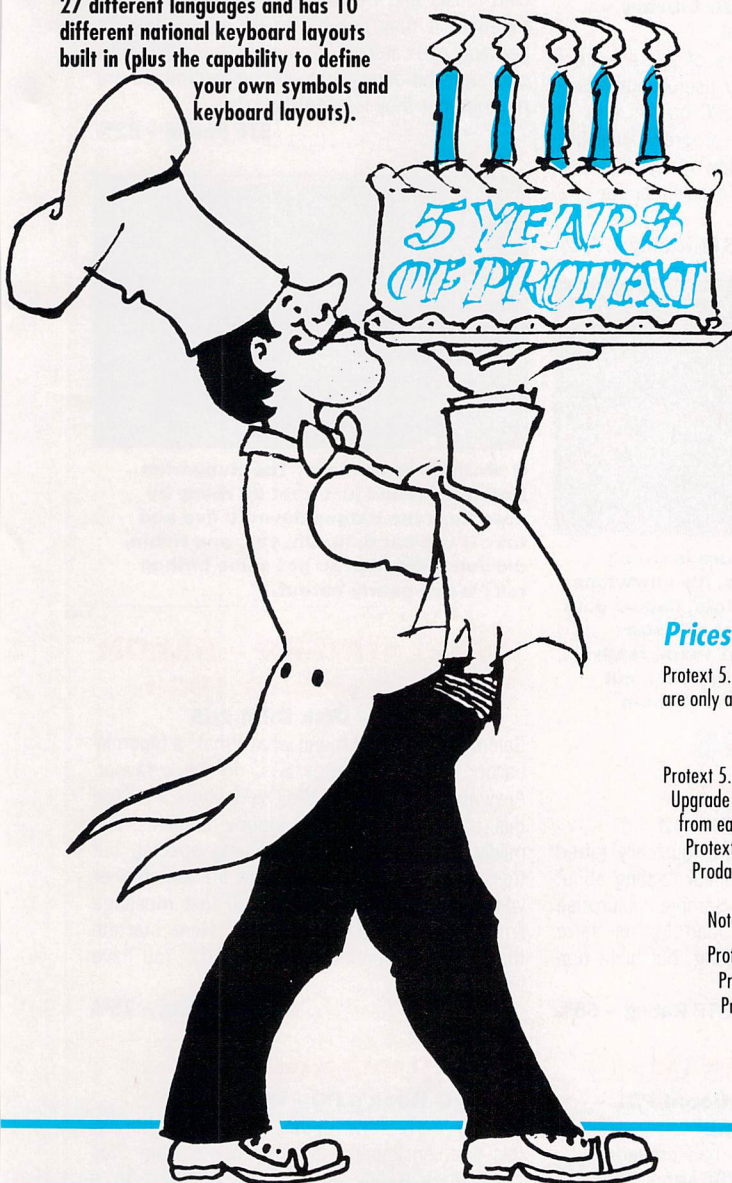
Protext 5.0 introduces a completely integrated system of pull down menus and dialogue boxes. The menus are among the many operations that may now be carried out with either the mouse or the keyboard. Protext really does give you the best of both worlds.

Protext 5.0 handles printer fonts flexibly and accurately. You can make full use of any number of proportional printer fonts, mix them freely within any line, centre them in headers, use automatically formatted footnotes. And Protext correctly formats your text as you type it, no matter how many font changes you use, showing you line and page breaks exactly as they will be printed.

Protext 5.0 is still the fastest word processor around. Even though we have made all these major improvements we have taken great care to ensure that text editing is as fast as ever. The menus work smoothly and quickly even with high resolution displays. But of course, you can use Protext's efficient set of commands and keys just as before and 5.0 remains compatible with all earlier versions from 1.0 onwards.

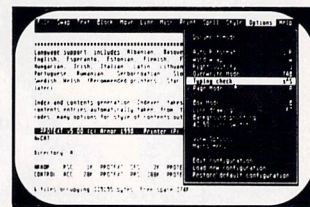
Protext 5.0 is a worthy successor to version 4, which was described as "the best word processor at any price", "the best text processor on the Amiga" and "the most powerful word processor on the Atari ST" (AUI, ST/Amiga Format, ST User).

Protext 5.0 heralds a new era of multi-lingual European software, in time for 1992 and the opening up of Eastern Europe. Protext may be used in at least 27 different languages and has 10 different national keyboard layouts built in (plus the capability to define your own symbols and keyboard layouts).



The Features

✧ **New fast & easy to use pull down menu system** with dialogue boxes and alerts; file selector; mouse dragging to set blocks. Menus complement existing commands and keyboard shortcuts, do not replace them. Menus may be used with mouse or keyboard. Amiga version follows Intuition guidelines.



✧ **Enhanced printing capabilities** supports multiple proportional fonts; mixing of different font sizes on the same line; proportional formatting whilst editing; side margin, headers and footers independent of main text font. Tabs, decimal tabs and centre tabs. Extensive range of printer drivers supplied.

✧ **Multiple file editing** - up to 36 files may be open; split screen editing.

✧ **Graphics mode support** on PC allows use in virtually any text or graphics mode including 132 column or 75 line VGA modes; user defined characters and on-screen bold, italics and underlining now on all versions; use of 13 different accents on any character.

✧ **Language support includes** Albanian, Basque, Czech, Danish, Dutch, English, Esperanto, Estonian, Flemish, Finnish, French, German, Hungarian, Irish, Italian, Latin, Lithuanian, Norwegian, Polish, Portuguese, Rumanian, Serbocroatian, Slovak, Spanish, Slovene, Swedish, Welsh. (Note: some printers do not support all languages).

✧ **Index and contents** generation. Indexer takes marked words or phrases; contents entries automatically taken from titles wrapped in control codes; many options for style of contents output.

✧ **Spelling checker** features completely new 110,000+ word Collins dictionary with very fast phonetic lookup. Anagrams and find word pattern. Foreign language dictionaries (German, Swedish available now, others to follow).

✧ **Many other enhancements** including multi-line footnotes and endnotes; automatic timed save; add column or row of figures; indent tabs; find word at cursor; 40 column mode support; sentence operations; inter-paragraph space; much improved expression evaluator; self incrementing variables; Roman numerals; newspaper-style column printing; file sorting utility with special options for names and addresses; revised manual plus new tutorial guide.

✧ **And don't forget Protext still includes** background printing; box manipulation; macro recording; exec files; headers and footers; find and replace; mail merging; undelete; file conversion utility; configuration program; auto reformatting; on screen help; time and date; typewriter mode; line drawing; disc utilities.

Prices

Protext 5.0 may be purchased from any good computer shop or directly from Arnor. Upgrades from earlier versions are only available from Arnor and the original discs should be returned with your order.

	PC	Amiga	ST/TT	Archimedes
Protext 5.0	£149.95	£149.95	£149.95	£149.95
Upgrade from v4.2	£60	£60	£60	N/A
from earlier versions	£75	£75	£75	N/A
Protext 4.2	£99.95	£99.95	£99.95	N/A
Prodata 1.1	£79.95	£79.95	£79.95	due 1991 Q1

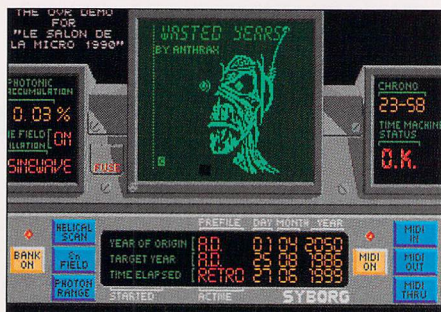
Notes:

Protext 5.0 requires at least 640K of memory on all machines
Protext 4.2 requires at least 512K of memory on all machines
Prodata requires 1MB of memory on the Amiga

ARNOR

sample. As usual, the sample is long, clear and after a minute, boring. Graphics are duff too. Thank the Lord he's moved on to bigger and better things with French Kiss.

STF Rating – 62%



■ The Overlanders do it in style in the *Salon de la micro* demo. A nice long, clear edit and some nice simple graphics. The sort of demo you can sit and listen to

UNIVERSAL PICTURES

MPH – Disk G35

Aggression is a demo group from Finland who get a big thumbs up from this PD column. Why, I hear you ask? Simple: there's no whizzy balls or mindless scroll text messages in this one. *Universal Pictures* is a conversion of an Commodore Amiga games machine demo. Doody solid 3D graphics, a drop of humour and no bland, boring and thoroughly stupid greetings.

STF Rating – 87%



■ I say, it's the *Death Star* aerobics show. One of Tufty's earlier demos has a nice sample but very duff graphics. Does any one want to team up with this man?

TEN OVERUSED DEMO THEMES (YAWN YAWN)

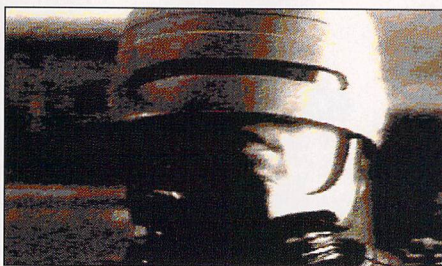
1. Balls. I don't care if they are bitmapped 3D. They're booooring
2. 45 minute scroll text messages about what time of night it is, why you haven't got a girlfriend, the fact that your ST blew up last week and how many zits you found on your face this morning
3. Greetings message sections which have more names in them than the Birmingham yellow pages and Ezra Pound's collected Cantos combined
4. Sine wave wobbly demo group icons. What's the point of a nice icon if you can't read it? (Pulls hair out by roots)
5. *Outrun*, *Xenon* or *Speedball* music. If a demo starts with that music I feel like taking a blowtorch to the disk
6. Chequerboard backgrounds which scroll around the screen. Come on, they've been doing that since the days of the Acorn Atom!
7. Bitplane psychedelic light shows. Its been done a zillion times before. They make me reach for the off button with a swiftness that would surprise a leopard on steroids
8. Really hissy samples which have you trying to guess which song the "music" has been robbed from. If you can't get a decent sample, don't bother
9. Oh yeah, and really bad sample edits which loop right in the middle of a word or beat. *Samplus Interruptus*, if you will
10. Stupid, banal, racist, sexist and downright unamusing jokes which just make you realise how mindless the programmers are

ROBOCOP 2

C Hack's PD – Disk 054/D

Yep, you heard right, another *Robocop* demo. This one's from the sequel, the brilliantly named *Robocop 2*. Considering it's not out on video for a good few months yet, these chappies have obviously got their hands on a pirated copy of the film. Bloody awful demo anyway. One looped sample and a couple of still frames from the film. Burn it.

STF Rating – 40%



■ I reckon that *Robocop* ought to go round this geezer's house and ask him how he got hold of all these stills from *Robocop 2*

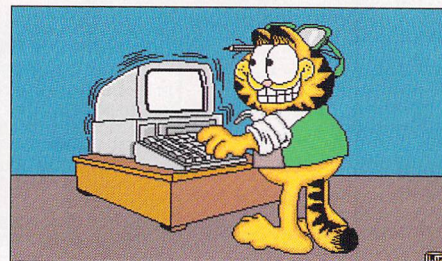
ART & MUSIC

GARFIELD SLIDESHOW

Public Domain

Can't attribute this one to any particular library as it came straight from the author Wizpop. Not much to it, really, a ZZ slideshow of Garfield piccies. However, the drawings are of a pretty high quality and you could tailor them to look the way you want, with your own text on them.

STF Rating – 70%



■ The cat with the fat and the grin is back. Garfield's got even more words of wisdom than Steve Carey on deadline day

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Paradise Computers, 9 Westfield Crescent, Brighton BN1 8JB

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PD Rebels, 12 Cornfield Road, Jump Farm, Devizes, Wilts

Riverdene PDL, 63 Wintringham Way, Purley on Thames, Berks RG8 8BH

Senlac, 14 Oaklea Close, Old Roar Road, St Leonards On Sea, E.Sussex TN37 7HB ☎ 0424 753070

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Sphinx Software, Erw Fynydd, Carmel, Llanelli SA14 7SG

ST Club, 9 Sulton Place, 49 Stoney St, Nottingham NG1 1LX

Wizard PD, 178 Waverley Road, Reading, Berks, RG3 2PZ

WoolleySoft, Humblesknowe Cottage, Ramolye, Dunblane, Perthshire, Scotland FK15 0BA

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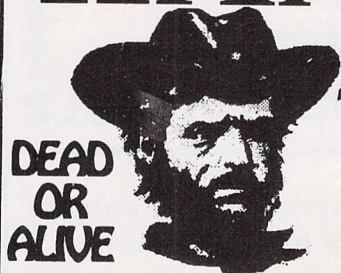
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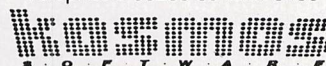
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87%

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the prof is back!

Do the professor's second and third helpings measure up to the first? David Jones dons his cap and tie and tries to make some sentences



■ Each of the Prof's games has excellent reward screens which help encourage learning – kids find the whizzing cars a treat

Prof Looks at Words, Prof Makes Sentences

SKILLS: READING

AGE RANGE: 4 – 6 YEARS

MACHINE: ALL STs

PRICE: £24.99 EACH

FROM: PRISMA SOFTWARE

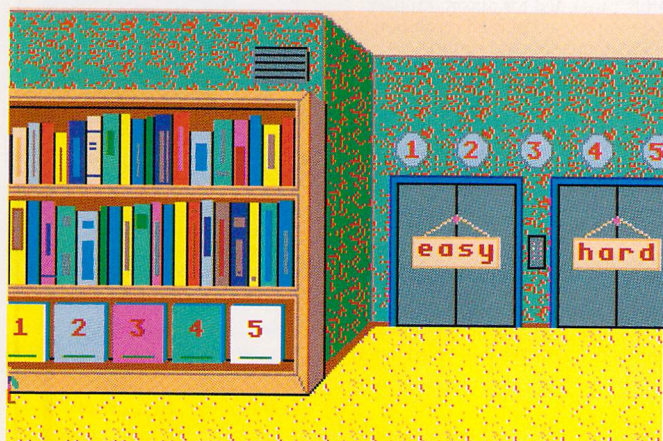
CONTACT: (0244) 326244

Prisma released *Prof Plays a New Game* last Spring (see STF 12) and are now releasing parts two and three. Part two, *Prof Looks at Words*, uses the same platform-game format employed in part one. You direct the Prof around using the arrow keys, searching for letters to complete words. There are five games here: finding beginning letters, ending letters, missing vowels, double letters and combinations of vowels. The

words used are those introduced in part one and in the five books in that package. Prisma suggest this package can be used on its own but this is not recommended.

"Finish a Sentence" and "Make a Sentence" make up part three, *Prof Makes Sentences*. The phases of the games correspond to the books in part one. You can play either "easy" or "hard" for each phase. Again you direct the Prof using the arrow keys to pick up answers but eventually you can enter answers using the keyboard.

In "Finish a Sentence," your ST begins by highlighting one word in a short sentence shown on the blackboard. You select that word from a group of three at the bottom of the screen. This is repeated for other sentences, each with different words highlighted. ➤



■ Sentences: easy or hard? In *Prof Makes Sentences*, you are given the option for each phase of the Prof's educational game



■ The adding screen of *Hooray for Henrietta* – can you save Henry from the cold and hideous custard that awaits him?

Hooray for Henrietta

SKILLS: NUMERACY

AGE RANGE: 5 – 12 YEARS

MACHINE: ALL STs

PRICE: £24.99

FROM: SCETLANDER

SOFTWARE

CONTACT: (041) 357 1659

Scetlander's first ST title *Hooray for Henrietta* is a competent Maths package comprising a disk, a comprehensive 16-page manual, and a button badge. Henrietta is about to marry Hopeless Henry until a mischievous bird, John the Parrot, steals Henry and his clothing.

When you load the program, you select the level of difficulty from one to eight. Henrietta's attempts to rescue Henry and his

clothes occur over four screens. The first deals with addition, the problems appearing at the bottom of the screen. Henrietta climbs a house to reclaim her incompetent fiancé and for every correct answer she gets a step closer to him. When reunited, they jig around comically in a cross between break-dancing and the Highland fling!

The remaining three screens follow the same format. The second deals with subtraction (at a boat race), the third with multiplication (hurdles) and the fourth with division (at a building site). If successful, the couple are permanently united. A bowl of custard covers Henry if he fails.

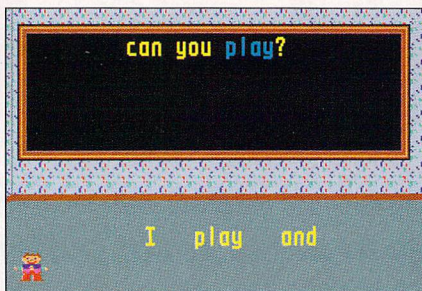
Hooray for Henrietta has an excellent parent/teacher facility which sets it aside from ➤



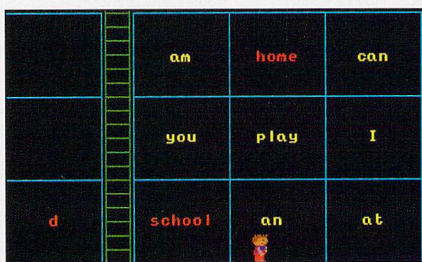
■ Each stage finishes with a rather odd little dance. Here, in the subtraction boat race, Henrietta has reached Henry first

➤ The sequence is again repeated but words previously highlighted are missing. As the game progresses, the numbers of words in each sentence increase. In "Make a Sentence" the format is the same except that you make sentences by unjumbling sequences of words. There are animated scenes which reward players for completing certain problems. One of these, for example, shows whizzing cars.

Prof Looks at Words and Prof Makes Sentences have 17 and 20 levels of play respectively. Both of these long-awaited packages help children progress from the basic skills covered by Prof Plays a New Game. Prisma claim their Play and Read series will, eventually, form a "complete reading tutor" – and there's no reason to doubt their statement. This package is recommended. **stf**



■ The bright, bold playing screen for Prof Makes Sentences. Select the right word to continue with the game



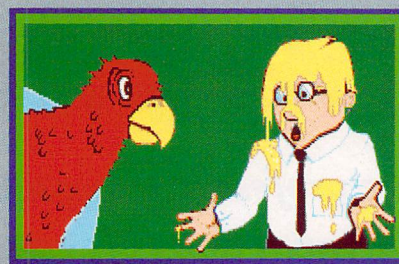
■ Prof looks at words on a familiar playing screen. Guide him around the platforms to collect the letters for new words

GRAPHICS	8
SOUND	5
VALUE FOR MONEY	8
LONG TERM INTEREST	7
EDUCATIONAL VALUE	10
OVERALL	89%

➤ the competition. It can be tailored to the needs of any primary school child and provides a comprehensive results section. You can save or print this for a permanent record of a child's progress.

This is a competent program but the sprites and graphics are small and this is a distraction. Kids are likely to tire of the four screens fairly quickly even though the program covers a wide age range. Finally, the documentation is misleading, implying that the National Curriculum attainment levels one to five are covered by the software when this is only partly the case.

Despite these grumbles, Hooray for Henrietta is recommended as a program which in a limited way helps to encourage basic numeracy and provides parents and teachers with a record of children's progress. **stf**



■ John the Parrot looks on as Henry is covered in custard. Just as well they don't use this deterrent at school!

Difficulty: MEDIUM		Results: David		Date: 10/10/1990		9 of 9
Level 6	Question type: DIVISION			Extra Questions: 0		
Number	Question			Try 1	Try 2	Try 3
1	11	÷	11 = 1	1	Ok	
2	14	÷	7 = 2	2	Ok	
3	56	÷	7 = 8	8	Ok	
4	80	÷	8 = 10	10	Ok	
5	24	÷	6 = 4	4	Ok	
6	2	÷	2 = 1	1	Ok	
7	72	÷	8 = 9	9	Ok	
8	48	÷	6 = 8		Not attempted	
Disc results	Level	Operator		Print	Exit	

■ Hooray for Henrietta provides the stats on kids' work, which comes in useful for both teachers and parents

GRAPHICS	6
SOUND	6
VALUE FOR MONEY	8
LONG TERM INTEREST	7
EDUCATIONAL VALUE	9
OVERALL	75%

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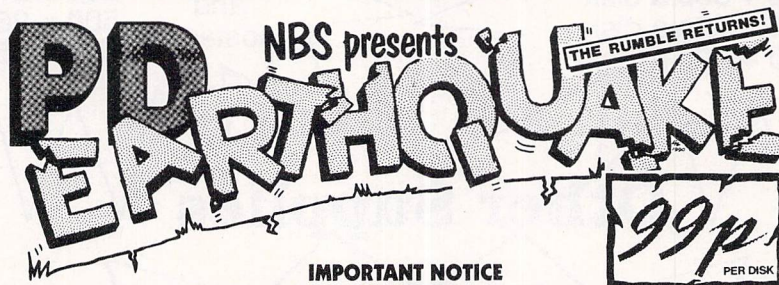
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SD 508 CUDDLY DEMO - Brilliant demo with many parts (D/S)
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DESKTOP



This month
FORMAT's
ever-helpful Technical
Editor Neil Jackson
takes a look at those
annoying first-timers'
blues, the problems
from "boot" to "blitter"
which plague the
annual post-Christmas
newcomers to the ST

INNER BLITTER TROUBLE

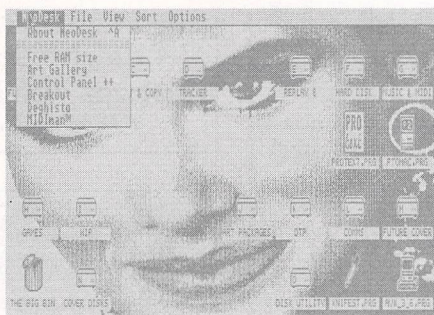
Mick Smith from **Worthing** has noticed that the STE and Mega ST have a "blitter" chip whereas the old STFM had none. What's it for, he asks, and should I be impressed?

The simple answer is yes, you should be impressed, and here's why. The blitter (short for bit block transfer processor) operates automatically on certain operating system functions to increase the speed of these functions and reduce the amount of program code required to work them. Blitter-enhanced functions include: area fills, rotation and magnification, brush line drawing, text transformations and scrolling, window updating, pattern filling and memory to memory block copying.

GET YOUR ACCS TOGETHER

Accessories cause a lot of people a lot of hassle, and **Nigel Trent** from **Humberside** is bound to agree. He's tried double-clicking on .ACC files in a desperate bid to get them to load and for his trouble he's been presented with all kinds of gobbledegook. How do they work?

Accessories are special programs that you don't need to double-click on. When it boots up, the ST looks for .ACCs on the root directory of the disk in the drive (that is, .ACC files which are not in any folders) and then loads them into a private section of its memory. Once it's done this, the Desktop appears, looking as normal as ever, and you can carry on as usual, loading



■ **Accessories live up in the top left-hand corner of the Desktop, and you can enter them from any program that runs with GEM**

and running the programs of your choice – with one difference, so long as they run with GEM.

If you move the mouse up to the "Desk" menu, you should see several additions. For every .ACC program on the disk (up to six are allowed) there's an entry in the menu. Select any of these by clicking on the name with the left mouse button and that accessory runs.

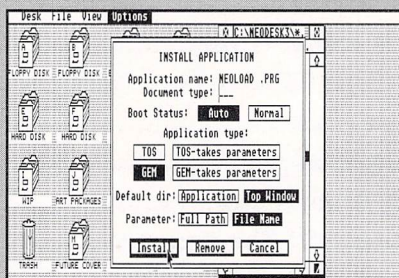
The advantage of accessories is that they can be run at any time, as long as the Desk menu is still on screen. So you could be running, say, *Degas Elite* and decide you need a calculator. If your disk holds a calculator accessory at boot-up, you can use it without even having to leave *Degas*.

THESE BOOTS ARE MADE FOR WORKING

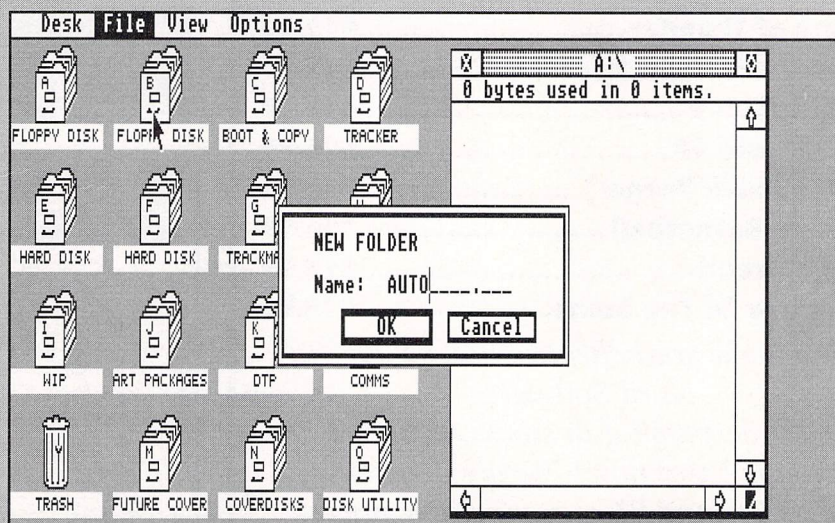
Simon Walker from **Reading** is having difficulties with auto-booting programs. He wants to know how you make a program load and run automatically whenever you reset the ST, without you having to select and load it each time. This is something the ST's manual studiously ignores, presumably because there are two ways of going about it.

On older machines, the only way of auto-booting a program is to create a New Folder, using the File menu from the Desktop. When you are asked to enter a name for the folder you must enter AUTO. Then you copy the program you want to autoboot into this folder, deleting the original when you've copied it. If you then reset the ST (leaving the disk in the drive), it loads and runs the program without bothering to show you the Desktop.

On newer machines (TOS 1.4 and above), you can still use the auto folder method just described, but there is also another way. First highlight your chosen program by clicking on it once and then select "Install Application" from the Options menu. Click on the "Auto" box in the dialogue window that pops up and then select "Install" to save this change to disk. Now when you reset, your program loads and runs immediately.



■ **Post TOS 1.4 (on new STs) – Using the "Install Application" menu, programs can be individually set up to autoboot**



■ **Pre TOS 1.4 – Autobooting requires you to create a folder named AUTO and place your chosen programs inside. This method can also be used on new STs**

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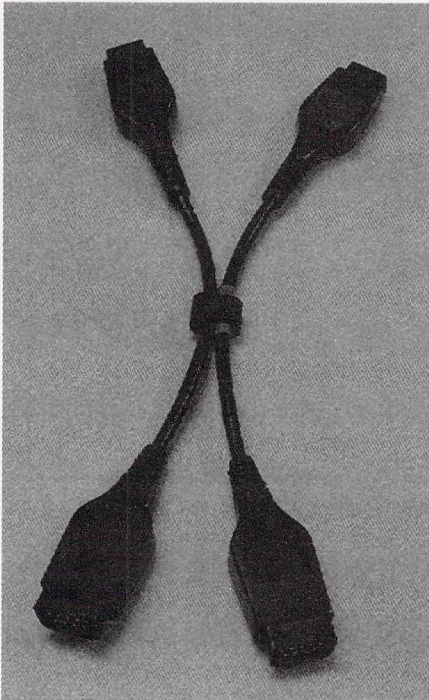
➤ INNER BLITTER TROUBLE

Mick Smith from **Worthing** has noticed that the STE and Mega ST have a "blitter" chip whereas the old STFM had none. What's it for, he asks, and should I be impressed?

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GET YOUR ACCS TOGETHER

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■ These insignificant-looking bits of wire could end up saving you more time and trouble than virtually any other add-on

bound to agree. He's tried double-clicking on .ACC files in a desperate bid to get them to load and for his trouble he's been presented with all kinds of gobbledygook. How do they work?

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DRIVING A HARD BARGAIN

ST FORMAT recently reported that some STEs have a faulty DMA chip (the chip that controls "Direct Memory Access" between the STE and peripherals like printers and hard drives), which makes them incompatible with certain hard drives, with the result that data saved to the hard drive may become corrupted after just three or four hours' use. (See *News* pages in *STF* 16.) **Neville Simpson** from **London** has just bought an STE and wants to know Atari's policy on replacing the faulty DMA chips which were the cause of the problem. Do they intend to recall the faulty machines? Will they make me pay for replacement chips or are they covered by the guarantee?

Atari do not plan to recall the faulty machines, even though there are only 100 or so in the hands of users. **Peter Staddon**, Atari UK's Marketing Manager, outlined the situation to *DESKTOP*. If your STE suffers from the DMA problem with a bona-fide Atari-made hard drive, you can have the offending chips replaced by Atari, providing the STE itself is still within its 12-month guarantee period. There are now only three types of Atari hard drive, the Megaflo 30, 60 and 44 (priced at £499.99, £689.99 and £919.99 respectively).

If you have trouble using a drive made by any other manufacturer... er, it's tough luck. Atari guarantee compatibility only with their own drives. Third party drive owners have to pay a charge to have their DMA chips replaced. **Bob Gleadow**, Atari UK's Managing Director, comments: "Atari will be providing a test and certification procedure to any third party manufacturer who wishes to claim Atari Tested Compatibility." But that's likely to be some time in the future and it doesn't help owners of non-approved drives – and that's most of them!

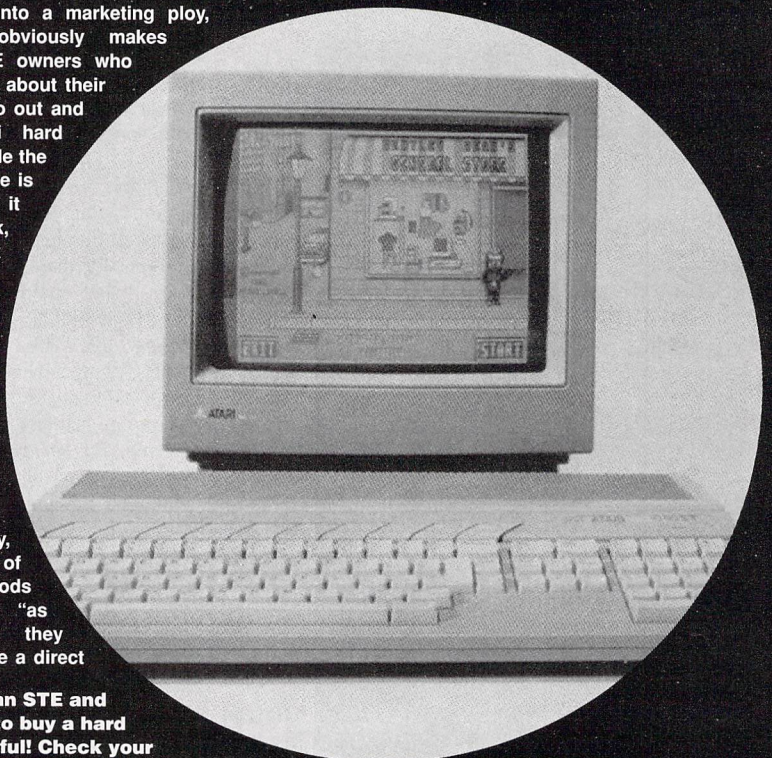
It seems Atari are trying to turn a corporate balls-up into a marketing ploy, because it obviously makes sense for STE owners who are unsure about their machines to go out and buy an Atari hard drive, now, while the STE's guarantee is still current. If it doesn't work, then Atari pick up the tab. If it does, then... er, you got your hard drive a bit earlier than you might have done.

So, here's a few *DESKTOP* words of advice. Firstly, under the Sale of Goods Act, goods sold must be "as described." If they aren't, you have a direct

recourse to the supplier – the shop that sold them to you in the first place. This is often easier than battling it out with the producers of the goods themselves, but you have to prove to the shop that the goods are not as described, which can take some doing. If you're meeting resistance, it might help to send a few letters making casual mention of the Trading Standards. (Besides, it's always a good idea to put complaints in writing if you don't get satisfaction as soon as you point out a problem. And always keep a copy of any such letter you send, so you can refer to it later if need be.)

Secondly, Atari have been marking the cardboard boxes of all recent STEs with a red sticker-dot, denoting that they are not affected by the DMA problem. If you're thinking of buying one without a dot, get the shop to check it working with your preferred hard drive before you hand over the dosh. If they won't, then walk away – you need dealer support, not a box-shifter, if you're going to make the best of your computing.

Finally, don't panic! If you're not in the market for a hard drive anyway, the problem doesn't affect you. All the other functions of the STE work as they should, so you won't end up with a white elephant. You only need to find out if your machine is one of the ill-fated few if you're planning to stick a hard drive onto it. With this aim in mind, *DESKTOP* would love to hear from any reader who has first hand experience of the DMA problem. We need to know the numbers of the dodgy machines so we can, in turn, let everyone else know, so if your STE has recently been fixed, let us know the serial number printed on the bottom of the casing. Write to us at *DESKTOP*, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW.



■ If you own an STE and you're about to buy a hard drive, be careful! Check your machine out with a reputable dealer before you spend a lot of cash

getting it across

Transferring to your ST? Follow these guidelines by Simon Williams

Once the initial wonderfulness of your new ST or STE has sunk in, you may want to use the data on your old machine. There are two stages in transferring data from an "alien machine." The first is to move the files into the ST environment and the second is to persuade the ST to read and convert them for its own use.

In the first stage you either carry over a disk from one machine to another or link the two computers with a cable. Unfortunately, there are a mass of different sizes and formats of disk. The only ST compatible format is the PC, and then only if your PC has a 3.5 inch drive which can read and write 720K disks.

If you're transferring from an IBM-type PC, you should format the disk for the transfer on the PC. PCs can't read disks from early STs (pre-TOS 1.4), but all STs can happily read 720K disks formatted by a PC. Recent ST/STEs are fully compatible with the PC disk format. You may also transfer from the Archimedes via a copy of the Acorn PC emulator or MultiFS on the Archimedes, which directly reads, writes and formats ST disks.

Other disk to disk transfers require a second drive. With a 5.25 inch second drive on the ST, you can transfer from the BBC Micro or Commodore 64, and with a 3.5 inch drive attached to an Amstrad PCW you can even draw files from this source. ST utilities for reading the PCW's CP/M disks are available in the Public Domain. (See directory, page 130.)

If you haven't a second drive, you can still transfer data by disk, using a copying bureau.

INCOMPATIBLE? NO, JUST DIFFERENT

	Disk Type	Operating System	Serial Socket
Atari ST	3.5 inch	TOS	25 pin D
Amiga	3.5	Amiga DOS	25 pin D
Amstrad CPC	3.0	CP/M 3.0	25 pin D*
Amstrad PCW	3.0	CP/M 3.0	25 pin D*
Archimedes	3.5	Risc OS	9 pin D
BBC Micro	5.25/3.5	Acorn DFS/ADFS	7 pin DIN
Commodore 64	5.25	CBM DOS	24 pin edge#
IBM PC	5.25/3.5	MS-DOS	25 pin D
Spectrum	3.0	proprietary	Telephone jack

* needs add-on interface

needs level convertor

One which can handle many formats is Grey Matter (☎ 0364 53499), based in south Devon. The company can shift data from Amstrad CPC and PCW, BBC Micro and most CP/M and MS-DOS formats. They charge £10 per disk.

You may find it easier to connect the alien machine directly to your ST, transferring your data down a suitable lead with appropriate file transfer software. The cheapest set-up is with a null modem cable. The cable fits the modem (Serial) port on the ST and the Serial port on the other machine. The sockets vary widely so quote the two machines by name when you seek advice.

It's best to get the same communications software running on both machines, and the

Public Domain *Kermit* program is widely available. Uniterm is one ST source of *Kermit*, available on disk COMS3, for £3.00 from Softville (☎ 0705 266509). *Printercept* is a useful file transfer utility (reviewed in *DESKTOP*, STF 17).

Once you've got the files across, you must convert them. If you're moving text files, save them in ASCII format on the alien machine, unless you are loading them into an ST version of the same program on the ST. The ST version of *Protext*, for instance, reads *Protext* files from other versions. Graphics files most probably need conversion. Sometimes you can save the alien program to an intermediate format which the ST program can then read from. **stf**

TEN TOOLS TO IMPROVE YOUR ST

- 1 An art package – *DeluxePaint* from Electronic Arts (☎ 0753 49442), £59.95
- 2 A word processor – *Protext V5* from Arnor (☎ 0733 68909), £149.95 [See box at right]
- 3 A sampler – *Replay 8* from Microdeal (☎ 0726 68020), £89.95
- 4 A video digitizer – *VIDI ST* from Rombo Productions (☎ 0506 414631), £99.95
- 5 A database – *Superbase Personal 2* from Precision Software (☎ 081 330 7166), £99.95
- 6 A Desktop Publisher – *Timeworks* from GST (☎ 0480 496789), £99
- 7 A replacement Desktop – *NeoDesk 3* from Gribnif/GST (☎ 0480 496789), £39.95
- 8 A disk utility – *Knife ST* from HiSoft (☎ 0525 718181), £29.95
- 9 An accounts package – *Personal Finance Manager Plus* from Microdeal (☎ 0726 68020), £39.95 – or see the special offers on page 164
- 10 A MIDI/Music package – *TCB Tracker* from MPH (☎ 0603 503382), £39.95

NOT FOR YOUR EYES ONLY

Pete Nichols from Chipping Sodbury wants help with reading documents from the Desktop. Why are there some files which just print up total gibberish?

The reason for this is that they are not meant to be read by humans at all. These files are usually required by other programs on the same disk in order for them to work properly. They are often called something like SOMETHING.RSC or ANOTHER.EXE. You can double-click on them, just like on any other non-program file. The document reading part of the ST does not differentiate between different kinds of non-program files and attempts to display them verbatim. So don't be alarmed – your disk isn't duff, you haven't got a broken program and you aren't expected to know Swahili to understand them. Most readable files are called something like README.NOW or something ending in either .TXT or .DOC.

THE NEED FOR LEADS

Darren Price from Ormskirk has a straightforward question (the kind *DESKTOP* loves!). What do you need to connect an STE up to a hi-fi? You need a twin phono plug to

phono plug lead, and one of these costs all of 98 pence from Maplin Electronic Supplies (Sales ☎ 0702 554155). Their part number for it is RW50E, but you should be able to get one at most hi-fi shops in your local High Street. Just connect the plugs on one end of the lead to the audio output sockets at the back of your STE and connect the other two to the AUX INPUT on your hi-fi.

BROWSING BY MOUSE

The other kind of letter that *DESKTOP* loves is the type with tips, like Martyn Armitage's from Sheffield. He's noticed an undocumented feature on the STE which he'd like to

CHEAPER WORDS

We like *Protext 5* [See box at left], but yes, £150 does seem quite a lot to pay for a word processing program, even if it is the best. So if you don't need absolute professional standard WP power, you could consider *Protext 5's* recently released little brother, *Protext V4.3*. It includes many of V5's enhancements, including pull-down menus, dialogue boxes and "block dragging" with the mouse – all for a rather more manageable £99.95. (Arnor ☎ 0733 68909.)

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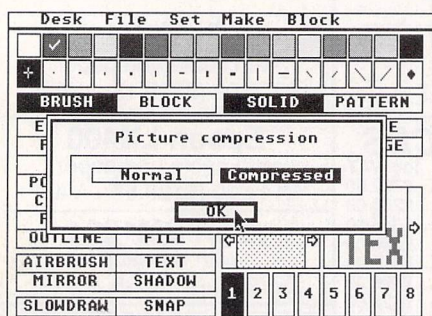


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share with us all. When you're reading a document from the Desktop and you've selected SHOW from the SHOW/READ/CANCEL dialogue box you have some degree of mouse control over the document on display. Pressing the left mouse button has the same effect as pressing the space bar – it scrolls the document on to the next page – and pressing the right mouse button aborts the reading session as does [ESC] or [Control]+C or Q.

DEPRESSION OVER COMPRESSION?

Brian Evans from Wallasey has spotted the fact that 1st Word Plus can load Degas pictures into documents. He has Degas Elite himself and he wants to have a go, but is having problems with filenames. 1st Word Plus can load only



■ **Degas Elite** can save files in two formats. **PI** files are not compressed, while **PC** files are heavily squeezed and need to be unpacked before they can be displayed

Degas files with a .PI3, .PI2 or .PI1 ending and his pictures are all saved as .PC3. How can he get them in?

When Degas first loads, it sets itself up to compress every picture it saves to disk. The file-extensions are .PC1, .PC2 or .PC3 for low, medium or high resolution pictures respectively. This is known as the *Degas Elite* format. It's possible to turn this function off by selecting "Compression" from the File menu within *Degas Elite* and setting the dialogue box to "Normal." Pictures are then saved as .PI1, .PI2 or .PI3, in what's known as the standard *Degas* format. Now they can be loaded into 1st Word Plus without problems.

ELSIE 10, DEGAS 0?

Lots of readers have written to *DESKTOP* bemoaning the fact that *Degas Elite*, the art package, doesn't have a STAR LC-10 printer driver supplied with it. The popular LC-10, a very useful colour/black and white printer, is noticeably absent from the list of supported machines, but it can still be used. *Degas* supports the JX-80P printer, which uses the same picture format as the LC-10. Select the JX-80P printer driver from the "Set Printer" menu on *Degas*, then select "Print Pic" and you can get full-colour (or mono) printouts from your faithful Star. All you needed to do was ask us! **stf**

FORMAT NEEDS YOUR DESKTOP TIPS

Remember when *FORMAT* showed you how to keep your mouse from sticking, or how to virus-protect your disks for absolutely nothing? Every month, *DESKTOP* features the best technical advice around, so if you've got a tip, a short cut, an undocumented feature, a bug – anything you've found that helps you get more from your ST – or even a technical problem, we want to hear about it! That way you can share your information with over 50,000 fellow ST enthusiasts and possibly even win our monthly £20 prize. And if it's a problem – well, if we don't know the answer, someone will!

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My tip is: Games ☐ Desktop ☐ Music ☐ Graphics ☐ Cover Disk ☐ Other ☐

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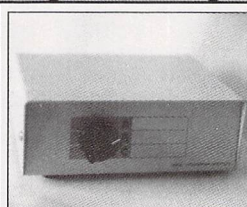
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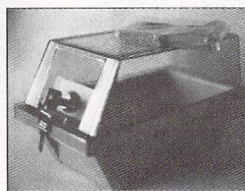
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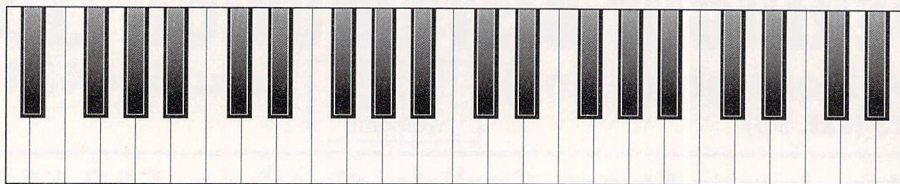
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what is MIDI?

Vic Lennard introduces the built-in communication system that enables you and your ST to make beautiful music together



One day when you're feeling curious, have a look on the left hand side of your ST. See those two 5-pin sockets towards the back? They are one of those special features that make the ST the versatile machine it is. They're for MIDI, the Musical Instrument Digital Interface, and they make the ST the ideal choice for musicians.

Before MIDI, you could get a computer to talk to a synthesizer, or two synthesizers to talk to each other, but back in the mid-1970s these were very basic affairs. They were monophonic – they could handle only one note at a time – and the only way they could send out information about that note was by using a control voltage (CV). If the computer wanted a middle C, for instance, it might send out a CV of five volts, and vary that by one volt per octave change up or down. The length of time for which the note played was set by the gate time.

This meant that you needed two connecting cables to control the playing of just one note. The emergence of the Prophet 5 synthesizer in 1977 made the problem even worse: it had five note polyphony – that is, five notes could be played at once – which improved the sound and the musical possibilities, but it meant that you needed ten cables to play those five notes on another synth!

Ending up with a room that looked like a spaghetti factory after the Blitz wasn't the only problem with the CV and gate method: there was no standard for the CVs, no transference of how hard a key had been hit (the "velocity") and a definite problem keeping synths in tune with each other. In 1982/3, with polyphonic synths becoming the norm, the MIDI system was created to simplify and standardise the situation.

What exactly is MIDI? It's basically a way of transmitting information from a master device

to slaves. It's what is called a serial protocol: it can send only one byte at a time. Each byte consists of a start bit, eight bits for information and a stop bit – ten bits in all.

There are 16 MIDI channels on which information can be sent, and two different types of message: CHANNEL messages, which relate to all real-time aspects of MIDI – notes, pitchbend and so on – and SYSTEM messages, which are not channel specific and tend to deal with the timing and general control of MIDI – Clock, Stop, Start and the like.

MIDI is fast for a serial protocol, 31,250 bits per second – achieved by using a current loop in the MIDI circuitry – and this means that a byte takes 0.32 milliseconds to travel from the master device to the slave. The length of cabling between them has to be kept to less than 15 metres or else there is a risk of messages being corrupted as a result of the capacitance in the cable.

The master device sends MIDI info from the OUT socket, and it's received via the IN socket on the slave device, which can then pass it on to the IN of another synth by using the THRU socket. However, the MIDI message is decoded and then re-encoded before winding its merry way onwards and a chain of more than two or three devices can easily lead to delays (at best) or data corruption (at worst).

Messages usually consist of two sorts of byte. A status byte comes first, and of its eight bits, the most significant bit (MSB) is set to one, the next three are used for the message type, and the last four show the MIDI channel. The status byte is followed by one or two data bytes which have the MSB set to zero and so have seven bits for their data value. Hence, the data value is a number between zero and 127.

The most important message, of course, is notes. Every time a note is pressed, a NOTE ON

is sent. Every note has three properties: a MIDI channel between 1 and 16, a note number between 0 and 127 and a velocity between 1 and 127. The lowest note is usually written as C-2, followed by C#-2, D-2, D#-2 and so on, all the way round to B-2. Then the number increases by one, so it's followed by C-1, C#-1 all the way up to G8 – a range of over ten octaves.

For an example, let's take a note C2 on MIDI channel 5 with a velocity of 100. All numbers are in binary. The STATUS byte starts with "1," followed by "001" to show a NOTE ON. The MIDI channel is a little weird: MIDI counts from zero while we count from one so MIDI channel 5 is shown as 4 – "0100" in binary. Put together, this is "10010100," which is 148 in normal counting. To make every MIDI byte into two digits maximum, this is translated into base 16 (hexadecimal), which utilises the numbers 0123456789ABCDEF. So the STATUS byte becomes "94H" ("H" signifying hexadecimal). Generally this is shown as 9nH, where "n" signifies one less than the MIDI channel.

There are then two DATA bytes. The first shows the note number: for a C2, this is 48, which in hexadecimal is 30H. The second shows the velocity of 100, which is 64H. So, the complete message is: 94 30 64, in hex.

These three bytes take just under one millisecond to travel down the MIDI cable.

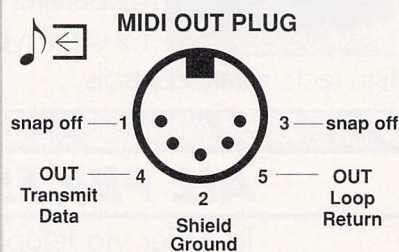
Stopping the note requires a NOTE OFF, which can occur in one of two ways: a NOTE ON with a velocity of zero or a STATUS byte of 8nH,

MAKING THE CONNECTION

To prevent earth loops and the resulting hum, MIDI OUT and THRU sockets have earth connections but MIDI IN doesn't. In fact, only three pins of the 5-pin socket are actually used. Looking at a MIDI plug, the pins are numbered 1, 4, 2, 5, 3 going anti-clockwise from left to right. Numbers 4 and 5 are used for MIDI data while 2 is the earth pin.

Atari have been a bit naughty in wiring up all five pins of their OUT socket with the other two echoing the input – effectively a MIDI THRU and OUT combined. This can cause problems when using cheap MIDI leads which solder across pins 1, 4 and 5, 3 for expedience. To prevent these, you should always snap off pins 1 and 3 from the lead used exclusively for the OUT of the Atari.

This lead can still be used for MIDI IN, which doesn't utilise pins 1, 2 and 3 at all, but you should have another lead handy for sending THRU your ST, when pin 1 becomes the "Transmit Data" pin and pin 3 the "Loop Return" (making pins 4 and 5 the problem!).



■ To prevent the hum which may be caused by earth loops, snap off pins 1 and 3 on the plug you use for MIDI OUT

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THOSE MIDI BLUES

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The full service, which includes the newsletter and on-line support and advice, costs £34.50; you can contact them on 081 368 3667.

the special NOTE OFF message. To turn off the note just sent, 94 30 00 or 84 30 vv would do. The "v v" stands for the release velocity – how fast you let the key go – but not many keyboards can transmit this and even fewer synths can respond to it, so the first method is by far the more used of the two.

Finally, let's look at a MIDI CONTROLLER message. These are used for sending out information from all of the various switches, pedals and sliders on a MIDI keyboard. The most common of these is the Sustain pedal which is MIDI controller number 64 (40H). This has only two positions – on (127) and off (0). All MIDI controllers have a STATUS byte of BnH, "n" being the number one less than the MIDI channel, as before. So a MIDI message telling a device to hold whatever notes it is playing on, say, channel 7 would be: B6 40 7F A message with the "7F" replaced by "00" would then turn the Sustain off.

This is an example of a MIDI switch. The MIDI volume slider is a continuous controller,

number 7, and can send out any value between a minimum of 0 and a maximum of 127. Volume is not the same as velocity: many synths change the quality or the timbre of a note depending on the velocity with which the note is hit, while a change in volume doesn't affect these things. You could set a synth to maximum volume by sending it the message: Bn 07 7F.

As you can see from these two controller messages, the maximum possible value which can be sent in one Data byte is 127, which is insufficient for some MIDI controls. Pitchbend is one of these: you'd probably be able to hear the

steps if the pitch of a note were changed in 127 steps, so pitchbend takes two Data bytes and has a Status byte all to itself.

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■ See page 120 for a special report on how Tangerine Dream use STs in their music, live as well as in the studio

MIDI HELPFILE

■ Each month Vic Lennard answers your queries about MIDI on these pages. If you have problems with MIDI equipment, write to MIDI helpfile, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW. Don't forget to include all the necessary information including serial numbers and a diagram of your system.

What's the difference between MIDI velocity and MIDI volume? Don't they mean the same thing?

When you press a key on a MIDI keyboard, you create a three byte message. The first byte gives the NOTE ON status and the MIDI channel, the second gives the note number, and the third gives a measure of how hard you have pressed the key. To be more precise, this is a measure of how fast your finger hit the note – and hence, it's termed "velocity." This takes a value between 1 and 127.

The receiving device may use this velocity value in a number of ways. It may simply vary the loudness of the voice, but more likely it may change the timbre

or tonal quality of the sound. Compare this to a real piano. A note struck with little force has a mellow, soft sound, while hammering down on a key creates a brighter, more cutting tone. This aural illusion can be put across through MIDI by controlling the tone filter according to the velocity value: the higher the velocity, the more the filter opens and the brighter the sound; the lower the velocity, the less the filter opens and the more mellow the sound. This example is slightly over-simplified, but it shows how velocity can be used to change the character of a sound.

MIDI Volume, on the other hand, simply acts something like turning down the volume control on your synth, although there is often some residual sound when MIDI volume reaches zero. It has no effect on the tonal quality of the sound.

So, if your receiving device is one of the sort that simply vary the loudness of a sound in direct proportion to the MIDI velocity without changing the sound character, then the effect achieved by reducing the velocity is practically the same as using MIDI volume without the extra MIDI commands. However, this situation rarely occurs. **stf**



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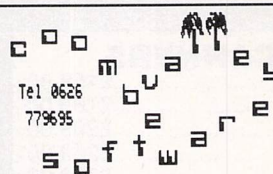
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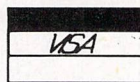
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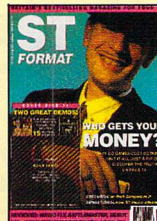
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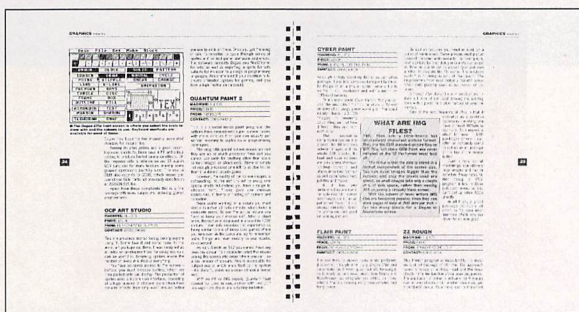
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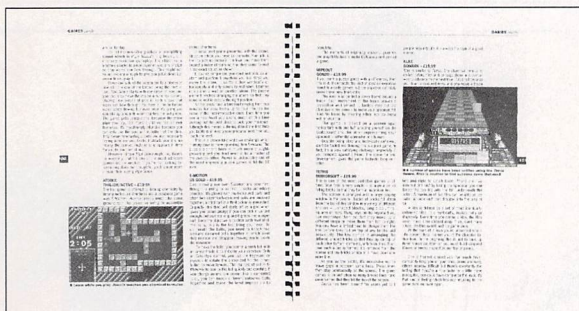
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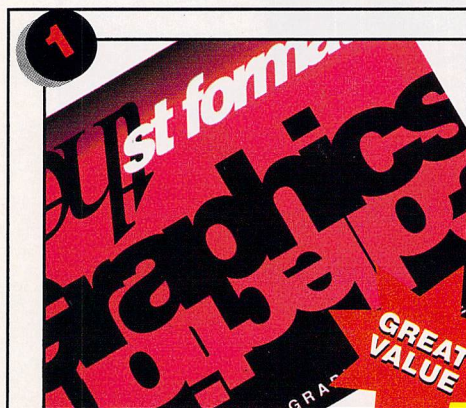
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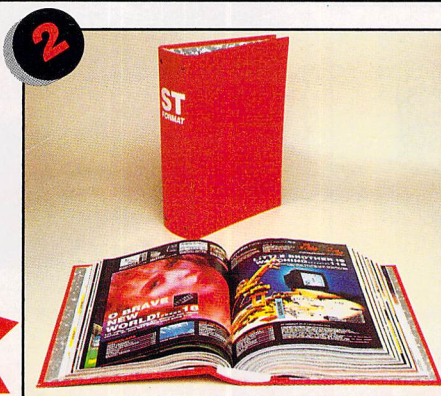
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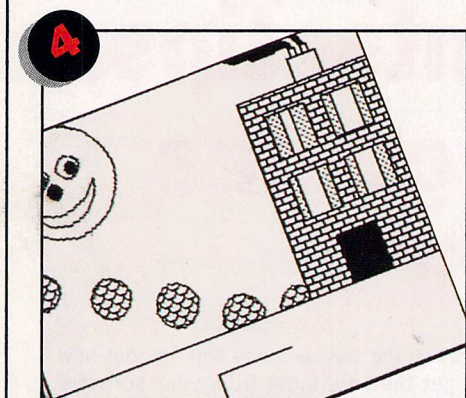
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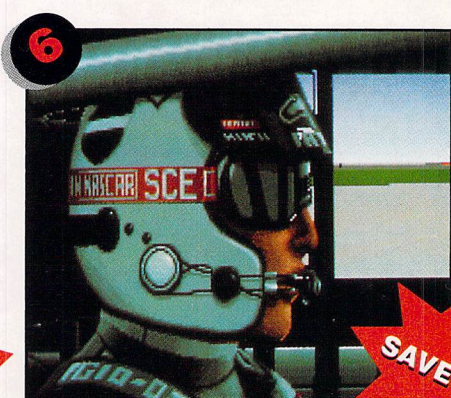
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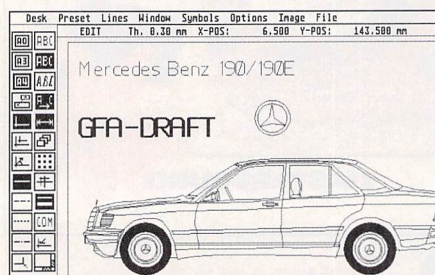
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FROM: GFA DATA MEDIA (UK) LTD

CONTACT: 0734 794941

An increasing number of architects and draughtsmen use Computer Aided Design (CAD) to produce technical drawings and plans necessary for manufacturing. The advantages are many – speed, accuracy, and the convenient ability to alter complex drawings quickly. The design can even be saved onto disk and sent to the manufacturers of the finished item. Up until now, however, CAD has been prohibitively expensive, so news of GFA Draft Plus 3 – a CAD program for the ST that gives you change out of £150 – has got to be interesting.

It comes on two disks with an extensive manual, complete with index. The main program is only 250K in size and so runs on any ST including the STE. It drives a colour monitor in medium res, or a mono monitor in high res. You can install it onto a hard drive, or run it from a floppy disk system. On loading, a file

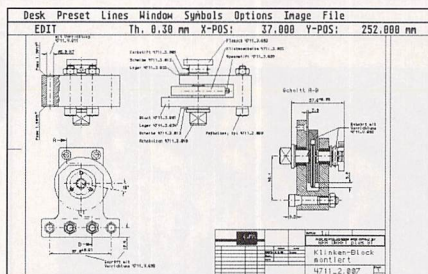


■ A German program, a German car. The X and Y coordinates in millimetres below the menu bar show the cursor position

DRAW, DON'T MAP

With an Art program like *Degas* or *Canvas* the image consists of pixels – it is "bit mapped." If you enlarge a section of it, all you get is a bigger view of the square blocks that make up the picture. With a Drawing or CAD program, the image is made with "vector graphics." The computer stores the picture as a collection of lines, each with a starting point (defined by an X and a Y coordinate), a length, and an angle. When you zoom in on a section of a drawing, you see these vectors displayed identically at each level of magnification. The vectors stored in memory are accurate to within a millimetre.

You can output the finished design to a printer or a plotter, or use pens of different thicknesses and colours to highlight details in the drawing. GFA Draft Plus 3 can output to a range of plotters as well as the normal Epson type dot matrix printers, inkjet printers and the Atari laser printer.



■ Pressing the [Tab] key switches out the icons, leaving you more room on the screen (sorry, drawing board). Pressing [Tab] again returns them back to view

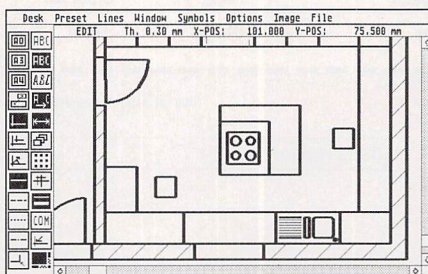
selector appears, enabling you to read in an existing drawing or create a new one.

The total work area is a window of up to 1365 mm square, and you can move about this in all directions using the normal GEM scroll bars. The drawing itself can be viewed in a number of user-variable magnifications. Two columns of icons displayed to the left of the screen control the most often used features of the program, so you can select or de-select that particular mode or tool by clicking with the mouse as well as from the usual pull-down menus along the top of the screen.

You draw lines or other geometric shapes such as circles, rectangles and polygons simply by clicking and dragging the mouse. All shapes are "rubber banded," as in all good graphics software, and text can be added in many different styles and sizes.

GFA Draft Plus 3 can't produce perspective drawings, only two-dimensional ones, but this is fine for most purposes. The 3D CAD software available elsewhere is much more expensive and complicated, although GFA are at this very moment working on such a 3D program which is to be compatible with GFA Draft Plus 3.

The program has a library of over 100 symbols and you can design and add custom symbols, assigning them to function keys for easy recall. Add to this the program's ability to read in and execute Hewlett Packard Graphic Language commands, plus those written in GFA Basic, and this completes a pretty full specification. The DXF data format supported



■ Here you are zooming in on your kitchen. You can increase magnification still further and even examine the sink's plughole without losing picture detail

SOME OTHER CADS

Here is a round-up of some of the competition that faces GFA Draft Plus 3. There are plenty of commercial CAD packages for the ST, but hardly any Public Domain programs except demo versions of those mentioned below. Contact your usual PD library (directory, page 130) or the producers below for demos.

■ Waltec Computers have a CAD program called *ARKEY*. Originally developed in the Netherlands, this program must be the most expensive ST application ever, with a price tag of over two grand! It does however produce 2D or 3D images of the design you are working on. An immensely powerful piece of software for real upmarket professional use with a price to match. Requires 1MByte RAM.

Waltec Computers ☎ 0274 491341

■ Expressworks offer *DynaCADD*, another 2D and 3D architectural and technical drawing program. This runs on both the ST and the PC-compatible, with data exchangeable between the two. *DynaCADD* sells for £650 plus VAT, and offers an amazing range of features at a fraction of the price of similar PC software. Discounts are available for educational users. Requires 1MByte RAM and double sided drive.

Expressworks ☎ 0252 726255

■ *Campus Draft* is an entry-level CAD program available from Power Computing at only £70. This one is 2D only, and can produce drawings between A5 and A2 size. This is a really nice little program with some excellent features, and could be ideal for students or for the production of small engineering-type drawings. It can run on a 520 ST.

Power Computing Ltd ☎ 0234 273000

means you can use your designs on any other computer like a PC-compatible and even within other CAD software! **stf**

■ GFA offer a generous discount of £50 and £100 respectively for owners of GFA Draft 2 and GFA Draft plus 1.5 who want to swap their old software for the new version

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ST FORMAT opens mouth, inserts foot

I read with interest the story on us Bitmaps (STF 18), as there seems to have been a substantial misunderstanding.

The comment attributed to me that implied that Ocean and Codemasters games were "a load of rubbish" was taken entirely out of its context. The question that the interviewer asked was in specific relation to music in games. At the Bitmap Brothers, we have been trying to ensure that all areas of our games are as well designed, programmed etc. as possible. One of the advances that 16-bit technology has brought has been the ability to use a much greater variety of audio material and, from working with Bomb The Bass on *Xenon 2* through to *Nation 12* for *Speedball 2*, we have consistently tried to use the best and most appropriate musicians available to us, whether or not they are "computer musicians."

As computer entertainment becomes more and more creatively "mainstream," so will the talents that it employs; artists from all fields of entertainment and consumer electronics will start to bring their varied talents to our industries, creating new demands on us as producers to develop only the very best products. Software developers and publishers need to recognise this as being more than a minor trend and set out to raise the standards of all the creative aspects of entertainment software.

I hope that this gives you a clearer understanding of our opinions and ambitions.

Mike Montgomery,
The Bitmap Brothers

stf Thanks, Mike, for clearing up an innocent misunderstanding. The Bitmaps interview as we received it was some five times the length we were able to use. It seems that at some stage in the "boiling down" process, we somehow managed to turn a constructive and specific observation into a generalised and dismissive one. It's quite an achievement to embarrass the Bitmaps and upset both Ocean and Codemasters with a single quote – apologies all round.

Spaced out

I was shocked by the shoddy work of Sean Master-ton when he reviewed Origin's *Space Rogue*. Several of us here in Kansas City are engrossed in this wonderful space adventure. If Mr Master-ton had played with a good joystick and a hard drive most of his complaints would have vanished. It is sad to think of the people who will miss out on another fine release from Origin just because Sean was permitted to review this game. In future, perhaps you could assign more than one reviewer to a project or assign Mr Master-ton only to arcade games.

Stephen Klick
Kansas City, USA

stf For what it's worth, Stephen, a few of the guys in the office checked out *Space Rogue* after reading Sean's rather harsh review (STF 16; 30%). We too disagreed with his rating, though for a somewhat different reason: in our humble opinion *Space Rogue* is far worse and not worth one tenth of the asking price. Any game which depends on you needing a hard



Write to: FEEDBACK, ST FORMAT,
30 Monmouth Street, Bath BA1 2BW

drive in order to enjoy it deserves all the critical slating it gets.

A complaint floods in

I wish to complain about the service I received from Electronic Arts in relation to the game

Flood. I discovered a problem: whenever you lose all your lives the game crashes, so you have to reload it. When I rang EA they said it was not a bug but a glitch on the disk, so I promptly sent it back, after being told that a replacement would be sent within a week.

STRAIGHT TO THE POINT

There's no room for wibble

■ What happened to this month's issue (December)? It was so heavy I injured my back attempting to carry it home from the newsagents! I take it there's no chance of you giving away a wheelbarrow on the cover of next month's issue?

DP Hackett, Westburn, Glasgow

■ Please include the odd Care Bear, Empire or Lost Boys demo on your Cover Disk. Also include a picture file converter which can change Spectrum 512, Neo, Degas, and Amiga Games machine IFF to, Neo, AGM IFF, Spec 512 and Degas as I cannot find one anywhere.

Lee Coombs

– Demos are very space consuming, but if we get inundated with requests we'll soon be doing as many as you want. As to the file converter, good idea, Lee, you'll definitely want to get your hands on the ST FORMAT two-disk Graphics Collection (£9.99, order number ST350 – see the Special Offers pages, page 164), which also includes complete versions of NeoChrome and Ani ST, a manual and oodles of conversion utilities.

■ After reading your article on PD libraries (STF 16) me and my friend are considering starting a PDL, but first I have some questions to ask you:

- 1) Can you start a PDL at any age (I am 13 and he's 14)?
- 2) Do you need a licence to start a PDL?
- 3) Can you copy PD disks and sell them or do you have to sell the original disk?
- 4) Where the hell can you get PD disks for 30 or 50p each?

Darren Hughes

– (1) Yes, though I'd strongly suggest you get your parents' support; (2) No; (3) There's no such thing as "original" PD disks – they're all

copies (that's the whole idea); (4) You can't. But buy blanks in bulk – see the ads in this very magazine – do your own copying and you're away. Let us know how you get on.

■ Cut down on the sexual innuendo, as impressionable teenagers like me might be reading!

Alex Buono, London

– Is this guy for real? When I was an impressionable teenager I spent most of my time looking for sexual innuendo, and being bitterly disappointed when I didn't find any.

■ Who is the female in the FORMAT Gold T-Shirt?

A. N. Onymous

– Her name's Deborah, you can find her this month on page 153 and the picture doesn't nearly do her justice.

■ How about a series on more advanced programming, not so much in a specific language, but the theory behind it. I'd like to see one on Vector graphics. In games reviews, I would love to know what the game was written with/on.

Matt Dixon

Horsham, West Sussex

– Neat idea. Support, anyone?

■ I've ordered all the back copies still available and now own all the copies bar one, STF 1. Is there any way of getting hold of a copy to complete a full set? I would, of course, be willing to pay.

Anthony Wood, Sittingbourne, Kent

– If anyone out there has any copies of the first issue they'd be willing to flog, send us your name, address and the price you're asking. We'll do the rest (without even taking a commission, honest guv!).

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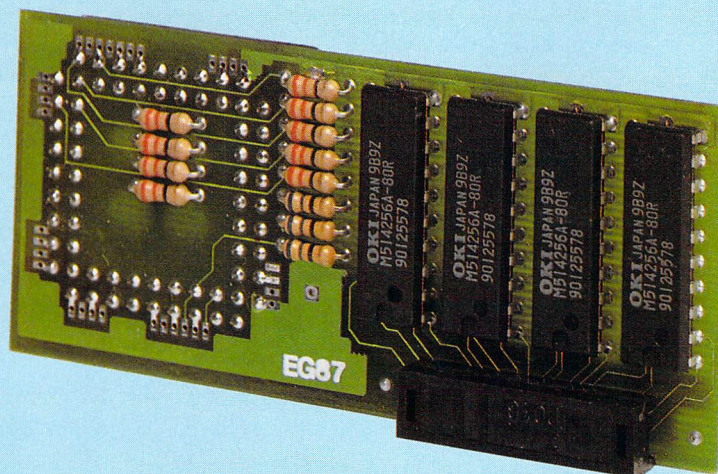
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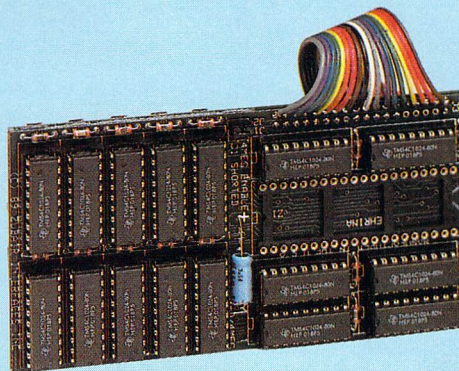
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LANGUAGE BARRIER

We've had lots of letters taking up I Lloyd's accusation in STF 17 that we're guilty of fruity language. Here's a selection.

■ Besides any moral consideration, when a journalist uses a swear word in the context of your magazine, he is simply showing he has recourse to a limited and unimaginative vocabulary. Swearing does not contribute to language nor enhance communication; it impoverishes the former and renders dull the latter.

Greg Mann,
Romney Marsh, Kent

■ Too many computer magazines today are falling over themselves in their haste to target their language at the lowest common denominator, namely these 16 year old gamers who seem to use words like "orgasmic" and "awesome" to describe anything remotely interesting. While there is not actually anything wrong with this, it may fail to impress some more mature readers. Before you write me off as an elder, I am a 28 year old programmer who uses his ST for games and serious stuff in roughly equal quantities.

Stephen Murgan
Leytonstone, London

■ I am bloody furious, me. I Lloyd (STF 17) is talking crap when he says, "there is nothing clever about swearing." I should know, I am the only Professor of Foul Language here at Coventry Institute of Education and Technology. Recent experiments have shown that people who swear regularly can drink 30% more beer, have IQs 60% larger than normal, and are 99% less likely to become a boring old fart.

Prof B Liar

■ Having just finished my first browse through STF 17, I feel I must have my two-pennorth in reply to I Lloyd of Lincoln. Quite simply, what utter tripe!

I am a widowed mother of three school-age children. One of the last things my husband did before he died earlier this year was to provide his family with a 520STE and printer. Being completely alien myself to the computer world, apart from a spot of word processing, I found myself recently in need of some kind of guidance.

After trying several of the publications available I decided, with the help of my twelve-year old son, to

become a regular buyer of **ST FORMAT**. Why?

Because you provide information about my machine and the uses I can put it to in a form which I can understand. Because you neither talk down to me as if I'm an imbecile (I may be, but that's beside the point), nor do you assume that I have a degree in computer studies. And certainly because of the language.

I find it witty and entertaining, and proof that you are human in that office. You occasionally print a word that I wouldn't use personally, but I find it impossible to take offence because it's obvious from the tone of your remarks that they're meant to be taken lightly with no offence intended.

As far as I'm concerned, keep your editorial red pens to yourselves and carry on with the good work – talking of which, could we please have more of your "Back To Basics" (STF 15)? I may be just the wrong side of 40, but I'm still in nappies as far as handling the "brain-box" is concerned.

Sandra Arnold
Chorley, Lancashire

stf Greg: you surely cannot be serious. Swearing – however you define it – can hardly exhibit "limited and unimaginative vocabulary," impoverish language or render communication dull – trite and superficial arguments I recall my teachers using when they very evidently could think of no better reason why we shouldn't refer to bodily activities that all of us do and none of us is supposed to talk about.

If you've ever looked at a dictionary of slang you'll discover just how varied and imaginative are the terms for those functions. Surely there are much better reasons why we shouldn't swear than these, such as the fact that it offends Prof B Liar (not to mention TV sitcom writers) so much cheap and worthless comic material?

As for Steve Murgan's not altogether convincing attempt to mimic the language of computer magazines ("orgasmic"? Give us a break!), I might point out that the ST FORMAT team contains three graduates, two with first class honours, as well as a Doctor of Philosophy (Oxon) – yes, really – and none of us believes for one moment that we're aiming at the lowest common denominator, which is an immensely patronising and thoroughly unconvincing way of writing.

Sandra Arnold's contribution strikes me as the most intelligent one we've had to this frankly not very illuminating debate. Isn't there anyone who can put up a reasoned argument

Flood ST shipped with a bug we were unaware of. If the player loses all of Quiffy's lives without qualifying for the high score table, the game crashes. Fortunately, this is a rare occurrence as a very low score has to be achieved to manage this, but unfortunately, our playtesters reached the table at all times. Also, the bug is only apparent on STs with a 1985 ROM, and we have only one machine with this configuration.

"This has been reflected in the number of returns, we have had a total of four disks returned, including Mr Whiteman's, and it was these returns that alerted us to the problem. By the time this letter is printed, a fixed version of the game will be available and will be sent out free of charge to any customer who sends in his or her original disk.

"Please allow me this opportunity to express our sincere apologies to Mr Whiteman and any other owners of Flood who have been inconvenienced. We have written to Mr Whiteman with regard to this matter and hope that he will be more satisfied with the outcome."

Softsellers from hell

At the beginning of July 1990 my son sent off to Softsellers a cheque for £19. This cheque was cashed within seven days of posting but, as yet, he is still waiting for the software to arrive. I have still not heard anything from them despite a further letter sent in mid-November asking for either the return of the money or the ordered software.

D R Mortlock
Basingstoke, Hants

stf We have just about the worst possible news D R Mortlock and anyone else in the same situation could hear: Softsellers have gone bust – see the item in this month's News pages, beginning page 9, for instructions as to what you can do about it, although we don't hold out much hope.

One suggestion is to use credit cards when ordering mail order software, since that way you have some insurance and will get back, so I'm told, most of what you pay out.

Single doubt, again

With reference to Steve Boulton's letter in STF 16. When will ST owners with single-sided drives realise that they are out of date? If they wish to avoid the hassle of sending away for disks, they should buy a double-sided drive. If people want quality games like *Operation Stealth* to be playable then they must expect them to come on double-sided disks. Can you imagine using six single-sided disks for *Operation Stealth*? Buy a double-sided drive or suffer!

Mark Escreet
Sproatley, Hull

stf I'm sure single-sided drive owners everywhere will thank you for your calm, considered views. Would you mind telling them how they can do it without spending nearly £100? And explaining to them why they should suffer when they were among the earliest people to support the ST? *stf*

■ Send your non-techie letters to **Feed-back, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW**. If it's techie in any way send to **DESKTOP** at the same address.

➤ After a fortnight and two phone calls I had still not received a replacement, so I rang again. They then said that it was a bug and that Bullfrog were fixing it.

Last week, seven weeks after my disk was sent to Electronic Arts, I rang them again. This time they said they were concentrating on *Pow-ermonger*, so they would not be fixing the program until this was completed.

How can they justify this treatment of existing customers? Did they not playtest the game? How many customers will purchase further goods from them knowing that there may be bugs in the games which won't get fixed for many months, during which they will be bereft of

the software? Were you supplied with a pre-production version which did not contain this bug?

If this experience is typical of Electronic Arts then I will not be purchasing any products off them in the future.

C J Whiteman
Baxender, Lancashire

stf I must begin by saying that a complaint about EA is rare indeed. However, I showed your letter to Simon Jeffreys of EA's Marketing and Press Relations Department, who replies thus: "Mr Whiteman seems to have been the unfortunate victim of circumstance. All EA products receive a substantial amount of playtesting.

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We must however stress, that unless you are experienced in graphology, then we can in no way guarantee the accuracy of the information that the program provides. If you are an enthusiastic amateur or just curious, then this program could provide hours of entertainment, whilst teaching you the finer art of this fascinating subject.

The text within THE GRAPHOLOGIST was researched and written by a top London graphologist/criminologist, James Woodward. The software was written by Martin Evans our consultant software writer.

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A footie team of compo winners

Back in our December issue we ran a threesome of competitions. The lucky winners of the five Philips CM8833 monitors up for grabs are as follows: Neil Sharp of Great Barr in Bu-urminggum; CA Mould of Regents Park in Southampton; Dominic Veney of Waterloo in Liverpool; Selina Ross of Milton in Glasgow; and DA Suter of Croydon in Surrey. May your SCARTS never get tangled up inside your overcoats.

That same issue we also gave you the chance to win one of five modems from the very nice Modem Marketing posse. Step forward Clive Cox of RAF Bruggen, BFPO 25, who scoops £458.85's worth of Pro-4 Quad Speed Modem. Just behind him, each picking up £114.94's

worth of Designer modem, come Lawrence Harvey of Brierley Hill; RJ Benton of Tamworth in Staffordshire; JC Fleck of Slough in Berkshire; and BA Pittman of Upper Norwood in south east London. May your rates never be baud. Hard luck to John Sampson of Duffield in Derbyshire, who sent his entry in on the back of a real, live, working phone (yes, really).

Last but by no means least was the Gasteiner 50MByte Megadrive hard drive, which becomes the property of G McCluskey of Hamilton, Strathclyde. Nice one, though why so many of you people refuse to let us know your first names (and in some cases any names at all) we'll never know. Cheers all round – the drinks are on you.

New readers start here...

If this is your first issue of *ST FORMAT*, welcome. We do hope you've enjoyed it – our future depends on it – and we warmly welcome any criticisms, suggestions for improvement or observations you may have. Write to: What I Thought of My First Issue of: *ST FORMAT*, 30 Monmouth St, Bath BA1 2BW.

We hope too that you've found this issue's emphasis on getting back to basics helpful, and that it's helped you get to know your *ST* a little bet-

ter and a little faster.

By the way, if you'd like a whole lot more of the same kind of helpful material, you could do worse but hardly better than securing a copy of *Get The Most Out of Your ST*, written by *ST FORMAT* stalwart Mark Higham. You can find out all about "This remarkable literary achievement... This stonking highpoint of western civilisation" (Mark Higham) by turning at once to page 151. Well, what are you waiting for?

And loyal supporters start here

If this is far from being your first issue, we hope you don't think we've been neglecting you this issue. As we have pointed out several times, few *ST* users are experts in every area of its use – from games to programming, and from DTP to databases and spreadsheets. So even if some of this issue doesn't come as a blinding revelation, we like to think you'll find much of it useful.

It's important that new users are made to feel welcome. The more active they are, the more software is bought and sold, the more applications are developed and the stronger is the *ST*'s future. That, I think, is

something we can all appreciate.

Still, you'll be pleased to know that normal service is resumed next month. Although we shall still be running the occasional "Back to Basics"-type feature, we have no intention of becoming *The Ladybird Book of the ST*. And we warmly welcome suggestions for features and ideas about the kind of direction the magazine should be going in. Write to: Onward and Upward, *ST FORMAT*, 30 Monmouth St, Bath BA1 2BW.

Oh, and we'll be doing our annual reader questionnaire next month, itself an excellent opportunity to make your voice felt.

Helping hand required

Many congratulations to Mark Higham, *ST FORMAT*'s fresh-faced and gifted Deputy Editor – the only member of the team to have been here right from day one, when we were *ST Amiga Format* – who has been appointed Editor. This promotion, according to everyone who has had to work under Steve Carey for 18 months, is long overdue.

And the old buggler himself? Well, he's henceforth to be known as Publisher, which apparently obliges him to wear a tie and wander about laughing like a maniac and jabbering stuff like, "10% plucked figure last offer haha take it or leave it ASAP heads or tails me tooism-factor haha thruppence payrise bah humbug bish bash bosh

loadsamoney haha etc."

What a Publisher does, however, for the other 23 hours and 48 minutes of the day when he's not hollering the above has not yet been explained to Sir Stephen of Carey, as we're apparently to call him henceforth. Suggestions, please, to: What Use Is A Publisher? *ST FORMAT*, 30 Monmouth St, Bath BA1 2BW.

Incidentally, the above reshuffle opens up a golden opportunity for a thrusting young games reviewer (see ad left). Enthusiasm, games knowledge and literacy are the primary qualities we're after – we can teach you later how to make up excuses for not submitting copy on time (see next item).

Cautionary tale

Flu-stricken Technical Editor Neil Jackson stays home to write his Cover Disk pages. Elated at finishing, he asks a mate to bring it in to the office for him on a floppy. Said

mate attempts to make a copy, but succeeds only in formatting the disk. This, at any rate, is Jackson's story.

Moral? Do as he says, not as he does: always ask yourself before you insert a disk into your drive, "Should this disk be copy protected?" (Trans-



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lation: "Shouldn't I be able to see through the little hole in the corner?") It happens to the best of us, as well as to Neil.

Alternative and somewhat more cynical moral: never believe excuses of a Tech Ed late with his copy.

Still, we like a laugh, us, so if you have similar stories of Great ST

Disasters, send them to us so we can sit round wiping our eyes, holding our sides and aching with laughter (as we did with Neil, who had to sacrifice a whole weekend rewriting, poor sod): You'll Never Guess What I've Just Gone And Done, *ST FORMAT*, 30 Monmouth St, Bath BA1 2BW.

Any more jargon?

Hope you found our special "jargon-busters dictionary" (page 65) of some use – "Spacebar" in particular will never be the same. Despite the occasional joke, however, it does have a serious purpose. So no doubt we're bound to have forgotten a few. If you spot any we've missed, serious or otherwise, send them to: Jargon-busters, *ST FORMAT*, 30 Monmouth St, Bath BA1 2BW. There's the usual bribe of a crisp (salt 'n' vinegar flavoured) tenner for the best batch.

NEXT MONTH

And that, barring accidents and disasters between here and the bottom of the page, is that. There is no more. Except for us to give you just a hintlet, a soupcon of a suggestion of a teeny weeny clue of the myriad delights that will, in the fullness of time, come to be known as *ST FORMAT* 20.

Available at a newsagent near you from Thursday 14 February (Valentine's Day – don't forget to get your loved one a nice bag of hot chips and a bottle of cold stout, and go easy on those pickled onions), *ST FORMAT* is likely to contain some, most if not indeed all of the following delights:

■ Reviews of *Calligrapher* and *Wordflair*, two of the most impressive recent additions to the ST repertoire in the increasingly blurred field of word/document processors and DTP. Does either offer the complete solution?

■ We continue to follow the progress of *Stormball*, Paul Carruthers' game in progress (see 38 of this issue for part one). We take a peek at edited (though definitely not censored) highlights of his private diary – a diary that reveals the true story of the blood, sweat and cups of tea that go into the making of what Carruthers is somewhat optimistically hoping will be the game that makes his fortune.

■ We continue with our beginners' series on programming in BASIC – see page 59 and this month's Cover Disk. Since we've given you a complete version of what is generally reckoned to be the best implementation of the language free with this issue, it's unlikely that you'll ever have a better opportunity to learn to program. Go for it!

■ There's a special feature on a very distinguished music-making user of STs. We can't say too much at the moment, since it's an exclusive, but it promises to be a bit of a corker (quick, ring someone up).

■ And then of course there's all the usual stuff: news, previews and reviews of everything that matters in the ST universe, plus the most authoritative and hard-hitting games section you'll find anywhere, together with reams and reams of technical help, games cheats, competitions, Public Domain and education reviews – plus much, much more.

We cannot of course guarantee that any of this will meet with the approval of new Head Honcho Mark Higham.

He's known to be partial to films, so you may just find the next issue packed to the page numbers with reviews of Rocky 8 and Friday the Thirteenth the Thirteenth. But somehow we doubt it. **stf**

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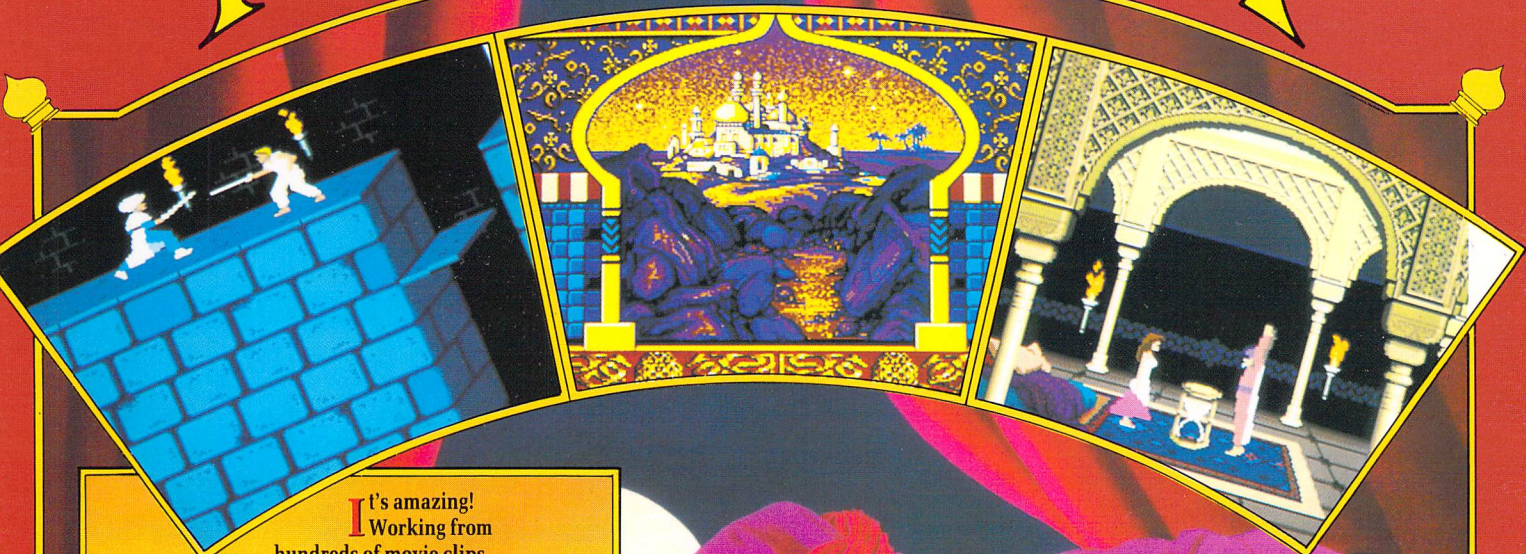
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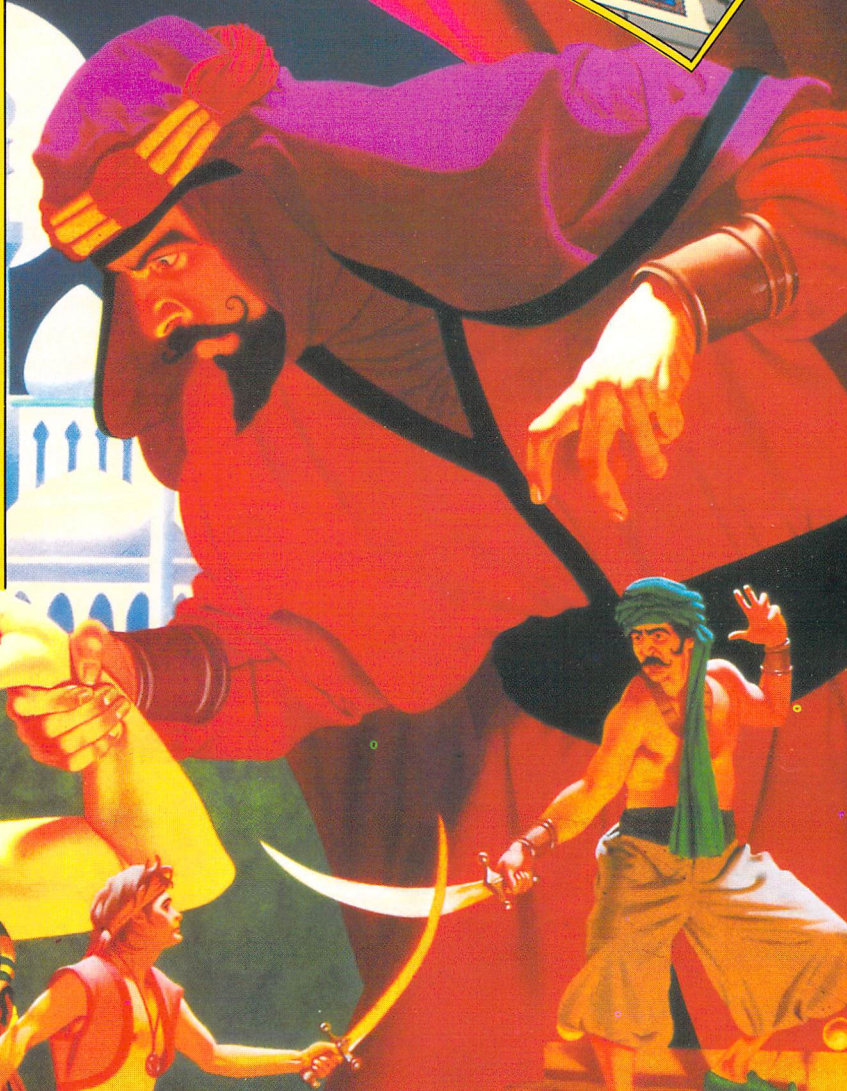


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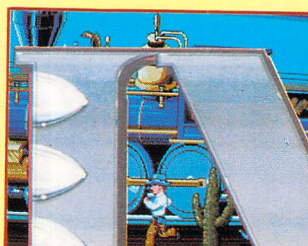
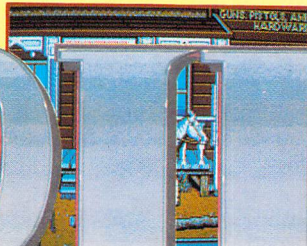
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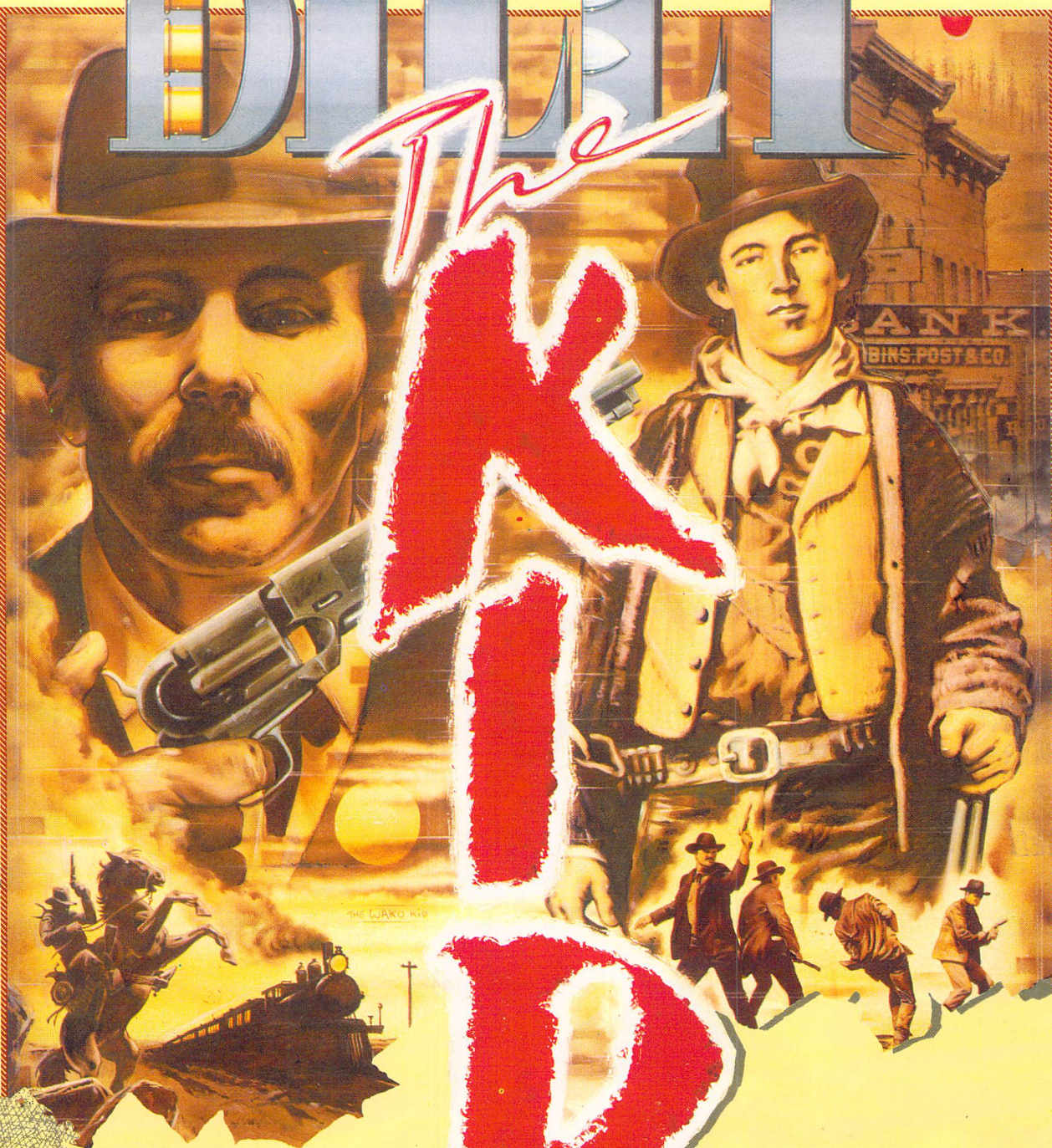
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